NOV 30 '54

NATIONAL FISHERMAN

NOVEMBER 1954

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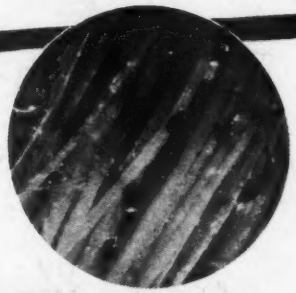

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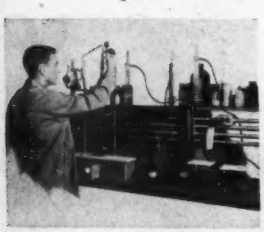

Columbian chemists maintain constant check on amount and strength of anti-rot substance, which is added to friction-reducing lubricant before application.

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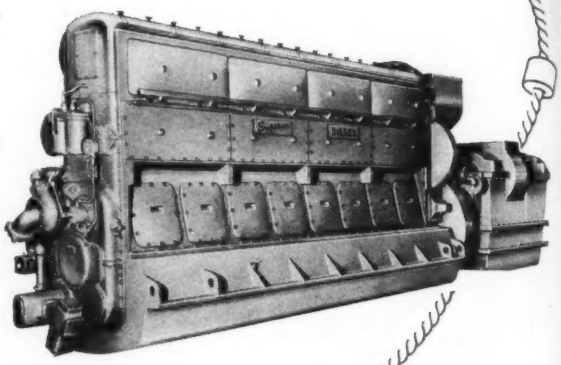
12 x 15	400-925
12¾ x 15	580-1765
14½ x 20	600-1440



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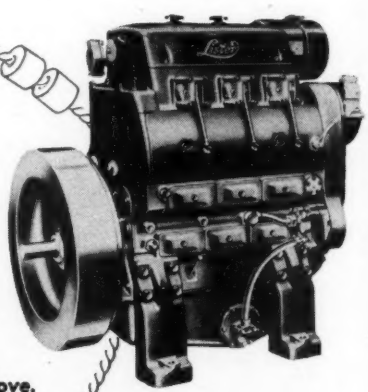
FR-2	3¾ x 4½	8-18
FR-3	3¾ x 4½	12-27
FR-4	3¾ x 4½	20-36
FR-6	3¾ x 4½	30-54



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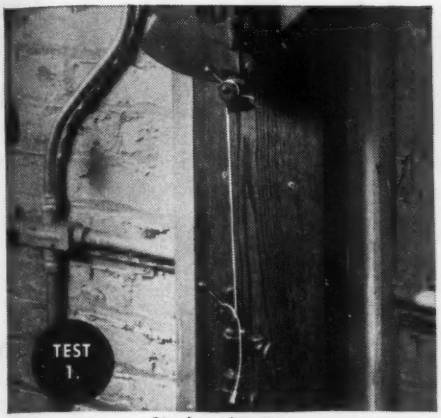
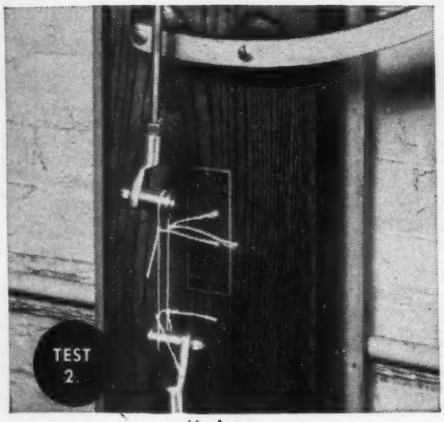


Single twine test



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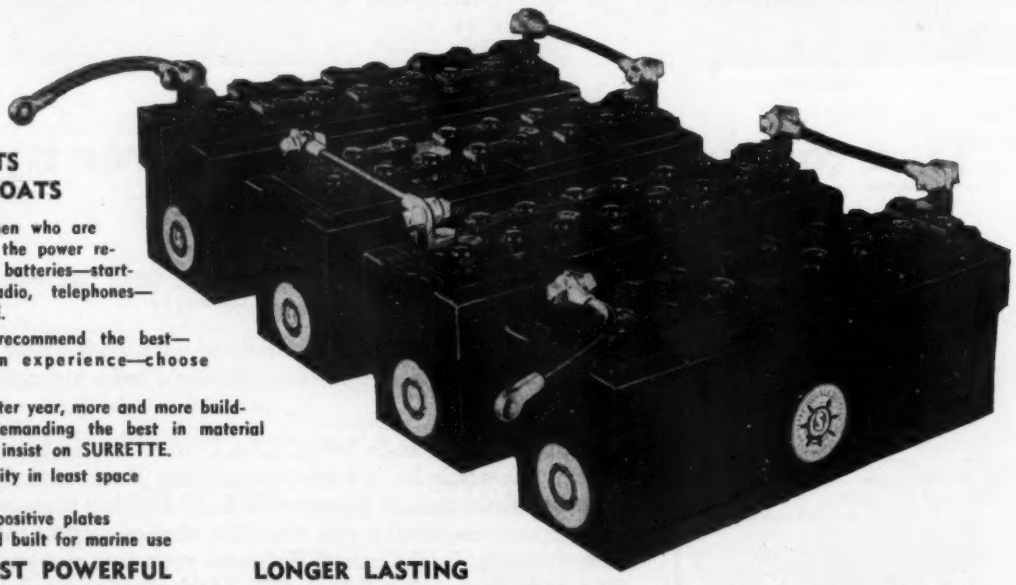

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NATIONAL FISHERMAN

Formerly ATLANTIC FISHERMAN

Serving the Commercial Fishing Industry of the United States

Fish Sticks Should be Promoted

Approximately 34,800,000 pounds of fish sticks were produced in the United States during the first nine months of 1954. This compares with about 2,164,000 pounds for the same period last year. Of this year's output, 31 million pounds have been of the cooked type.

After the limited output of 1953's first nine months, a fish stick boom began in October of that year when monthly production first rose above the 1,000,000-pound mark. Monthly output cleared the 2,000,000-pound mark in December, 1953, and increased steadily to March 1954, when 4,090,000 pounds were recorded. Monthly production hit a record high in June—4,434,000 pounds—and averaged 4,155,000 pounds in the third quarter. Total output for the year is expected to reach 50 million pounds, as compared with 7,502,000 pounds last year.

An official of a large grocery chain reports that its frozen food sales are up 30 percent over last year, and that a substantial future growth is anticipated. The largest increase is being shown by frozen prepared foods, which gained 152 percent. It is evident that prepared foods now have taken the play, and according to present indications, increases in frozen food sales will be in this category.

At this year's National Frozen Food Packers Convention it was pointed out that prepared frozen foods, ready to be warmed and eaten, have the greatest sales potential in the food industry. More than 30 percent of frozen food sales on the West Coast are prepared products and a similar development is expected in the East.

However, one of the Convention speakers warned that it is up to the packers to merchandise the new products. It is not enough to have the retailer stock the new items in his display cases. Mrs. Consumer must be presold by advertising and merchandising.

The test market promotion campaign on fish fillets and fish sticks being conducted by National Fisheries Institute in Columbus, Ohio, is a step in the right direction.

While some individual packers of fish sticks have done an outstanding job of advertising their products to the consumer, there is a real opportunity for industry-sponsored promotion.

It is well recognized that the fish stick boom has given new life to the commercial fishing industry. Consumer acceptance of fish sticks has been so widespread that some sources expect them to do for the fisheries what fruit juice concentrates have done for the citrus fruit trade.

Rather than just riding along on the frozen food bandwagon and taking what business comes voluntarily, the fishing industry should capitalize on its new-found natural, the fish stick. To do this requires the packing of quality products, identified by species, attractively wrapped, properly merchandised and widely advertised. No matter how good a food product may be, its market potential can never be fully realized unless it is constantly promoted.

With so many segments of the food business aggressively competing for the food dollar, it is imperative for the fish stick industry to get behind an industry-sponsored advertising campaign to extol the merits of its products.

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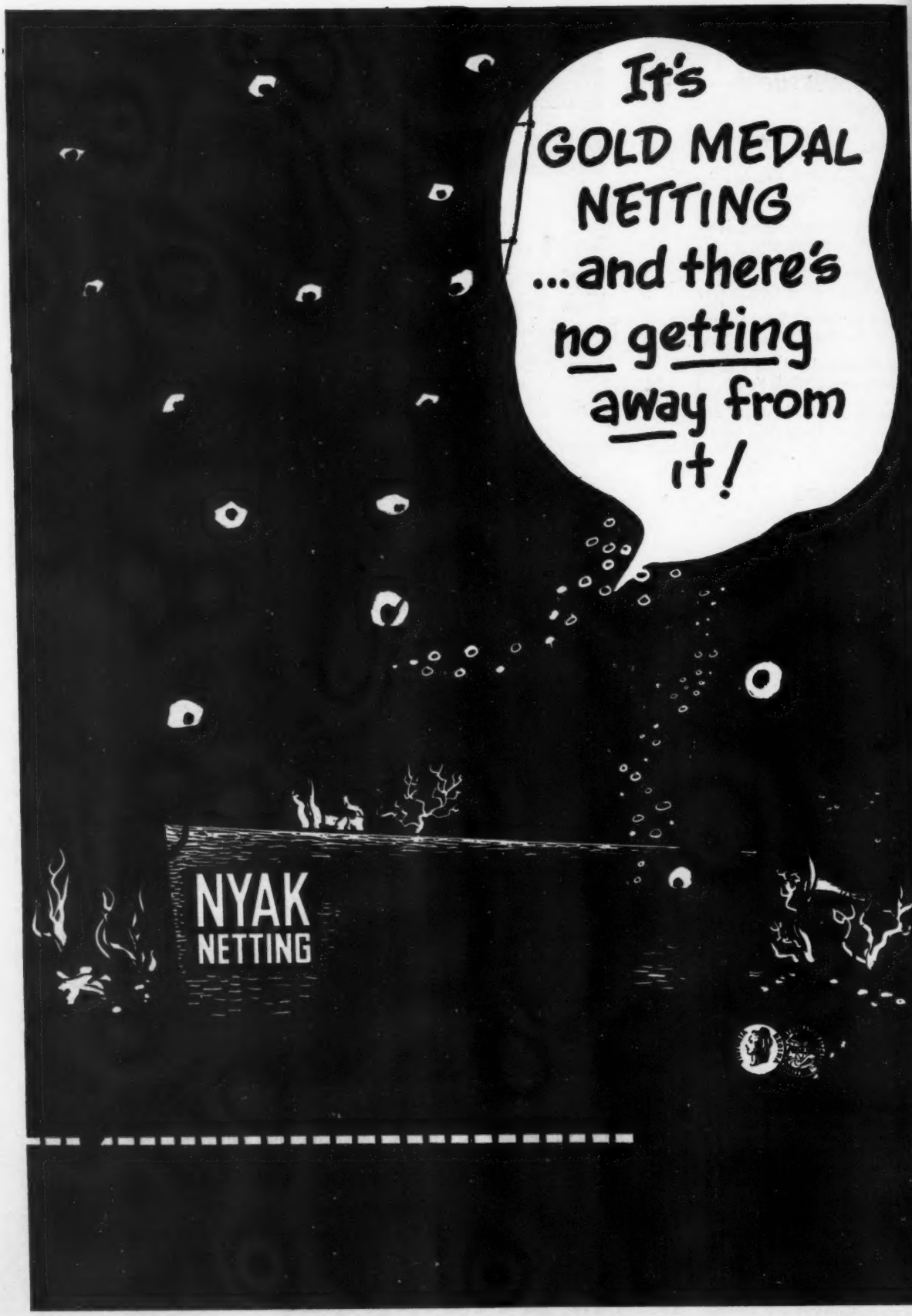
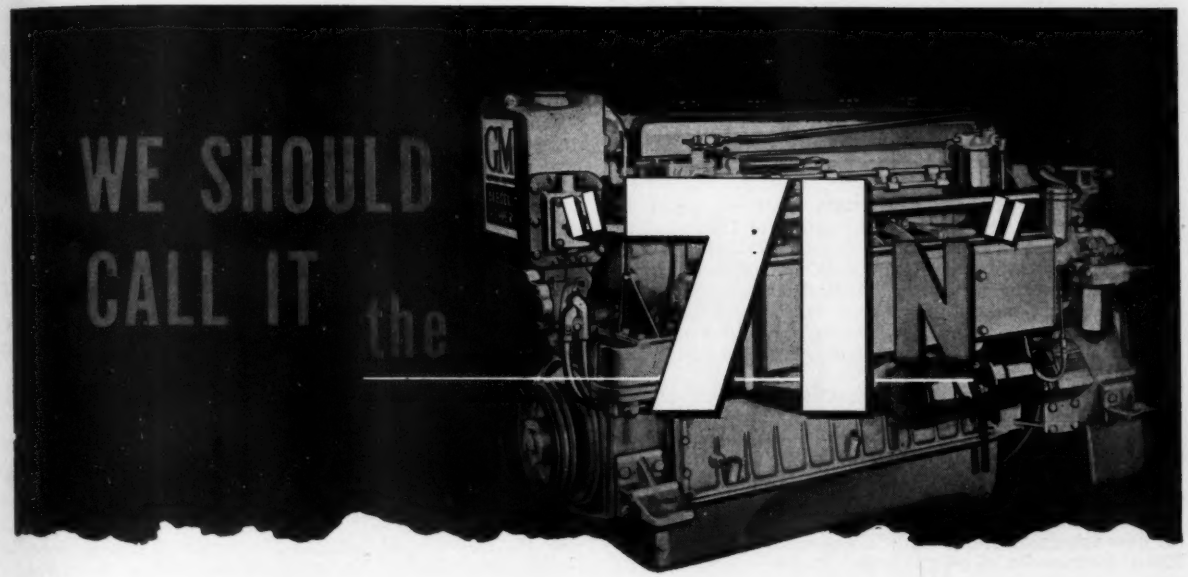

It's GOLD MEDAL NETTING ...and there's no getting away from it!
NYAK NETTING



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FISHERY PROGRESS

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Fishermen's working conditions were discussed by committee of 12 experts at headquarters of International Labor Organization in Geneva October 25-November 5. Group proposed three draft international instruments on minimum age for fishermen, medical examination, and articles of agreement for work on fishing vessels. Committee's recommendations were to be submitted to International Labor Organization's Governing Body in Rome November 16 to 19.

All these proposals relate to maritime fishing in salt waters. Under draft instrument on minimum age, children under 15 years of age would not be employed on fishing vessels, and young persons under 18 years would not be employed on coal-burning vessels as trimmers or stokers.

Second draft instrument proposes medical examinations for new fishermen and periodical examinations thereafter. Third instrument suggests draft articles of agreement stating clearly conditions of employment for fishermen, including wages or share of catch, scale of provisions, capacity in which fisherman is to be employed, and voyages to be undertaken, if this can be determined.

In addition, experts reached agreement on set of principles recommended for inclusion in possible international instrument on accident insurance for fishermen. Representatives from United States at conference included Harold E. Lokken, manager, Fishing Vessel Owners' Association, Seattle, Wash.; and P. McHugh, first vice-president, Seafarers' International Union of North America.

Purchases of surplus fishery products by Federal Government may not be charged against the $3,000,000 in customs receipts reserved in Saltonstall-Kennedy law for fisheries research, Acting Comptroller General Frank H. Weitzel has decided.

Mr. Weitzel held that Congress intended to provide separate limitations of funds to be spent on the two programs—$3,000,000 for research and $1,500,000 for surplus purchases. He said these independent programs "are to be given effect, without regard to each other, or as one limiting or restricting the other." Money for both programs is derived from customs receipts on fish products.

Department of Agriculture must now determine whether it will use the authority it possesses under the agricultural act to buy up some of New England's heavy fish inventory for distribution in public and private relief channels.

California sardine comeback apparently has occurred, with fishermen catching more than 34,500 tons as of early part of November. Pack has gone over 700,000 cases, or seven times more than were canned at same time last year.

Veteran fishermen believe California sardine catch for season may run about 50,000 tons. As these will be used entirely for canned sardines—no diversion to oil and meal production—some 1.5 million cases may be realized.

California sardines have been virtually absent from usual fishing areas for two full seasons. Over $4 million has been spent recently in an effort to find reason for their disappearance.

Saltonstall-Kennedy Act research will get underway with an economic study of shrimp industry and an investigation of Florida fish marketing. In shrimp project, main emphasis will be on finding better ways of distributing and marketing the shellfish.

To initiate the shrimp work, Fish and Wildlife Service has enlisted services of Charles A. Carter, formerly with United States Tariff Commission and an outstanding expert in fisheries matters. Contracts with leading marketing research firms also are being let. Independent research by Fish and Wildlife Service's Branch of Commercial Fisheries will be conducted.

Domestic shrimp industry produces about 225,000,000 lbs. of shrimp annually, valued at around $50,000,000. Industry provides livelihood for approximately 15,000 fishermen and contributes to income of another 15,000 employees in shore establishments numbering around 600.

First contract whereby Fish and Wildlife Service localizes its activities in carrying out provisions of Saltonstall-Kennedy Act has been let to University of Miami. The University will study past and present markets for Florida fish, investigate forces competing with these markets, look into possibility of expanding present markets and creating new markets, and recommend changes in methods of handling, preserving, shipping, and selling Florida fish.

University of Miami, which serves as official fishery research arm of Florida State Board of Conservation, reports through its Marine Laboratory staff that Florida fin fisheries are suffering from declining markets. In many areas fishing has been curtailed, with fishermen frequently being placed on catch quotas.

Basic purpose of Saltonstall-Kennedy Act is "to promote the free flow of domestically produced fishery products in commerce." Designed to strengthen American commercial fishing industry as a whole, the legislation provides that an amount equal to 30 percent of duties collected under customs laws on fishery products shall be transferred annually for three years from Department of Agriculture to Department of Interior.

New owners of surplus trawlers located in Germany have been announced by U. S. Army Property Disposal Service. The five trawlers and the successful bidders are as follows: *Pan Trade Andros* and *Tern*, Van de Grijp, Holland; *Swell*, Irving Usen, Boston, Mass.; *Pacific* and the *Josephine Ess*, Art Motors, Inc., Brooklyn, N. Y.

Alaska salmon pack for 1954 through October 1 amounted to 3,101,923 cases, which was more than 200,000 cases above the 1953 total, but far below other postwar years. A breakdown on the catch follows: red salmon, 734,081 cases; chums, 1,007,829; pinks, 1,145,436; coho, 162,709; and kings, 51,868.

Chief of Exploratory Fishing and Gear Development Section of Fish & Wildlife Service is now Donald E. Powell. His recent promotion comes after being with the Section since 1949.

Powell first was employed by Fish & Wildlife Service as a fishery engineer. He worked aboard the Service's exploratory fishing vessel *John N. Cobb* until 1951, when he was assigned to Washington, D. C., as a fishery methods and equipment specialist. In 1952 he was promoted to assistant chief of the Exploratory Fishing Section.

Composition of Cooked Fish Dishes is the title of new Fish & Wildlife Service publication. The pamphlet indicates the proteins, carbohydrates, food energy, and other beneficial elements found in a number of popular fish dishes in the "ready-to-serve" stage.

Information in this report will be particularly valuable to dietitians and nutritionists concerned with large quantity food preparation. Copies of the new bulletin may be obtained from the Superintendent of Documents, United States Government Printing Office, Washington 25, D. C., for 25¢ per copy.

N. E. Fisheries Technologists, at their first meeting of 1954-55 season in Boston on November 1, elected new slate of officers. New executive committee includes: John D. Kaylor, chairman; John McLaughlin, secretary; Harold E. Crowther, programs; Joseph F. Puncochar, nominations; Earl P. McFee, membership; Harris W. Magnusson, publicity.

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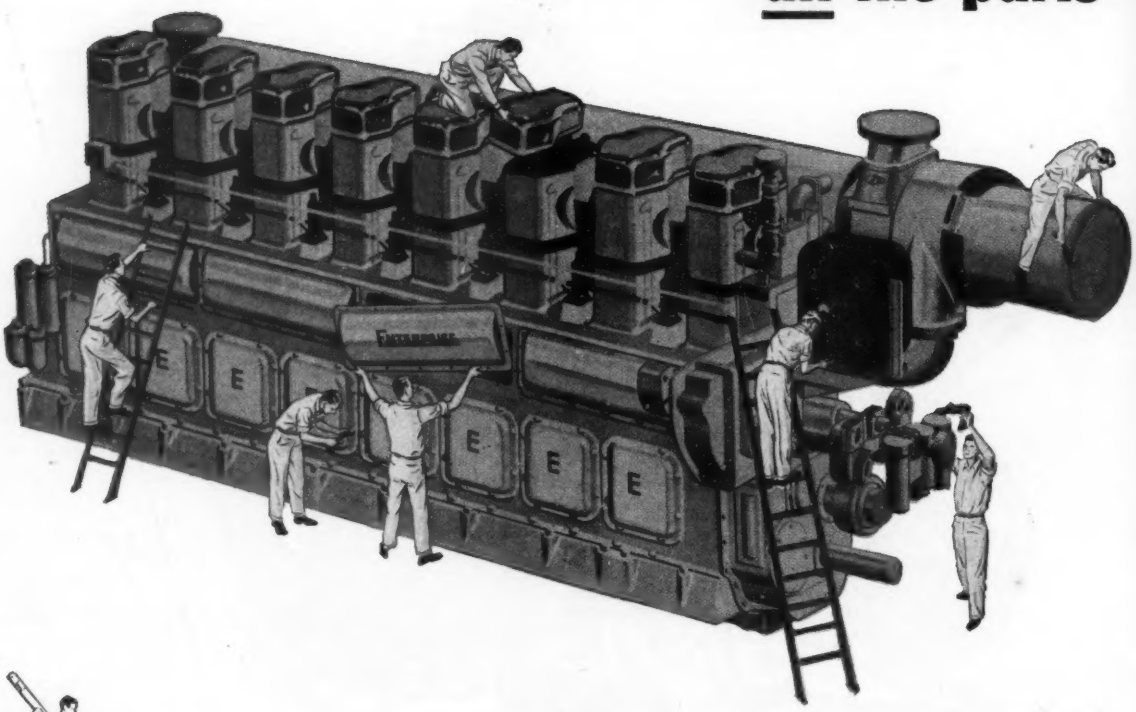
It's easy to get to all the parts



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Live-Bait Equipment on Pacific Tuna Clippers

New trap lift net for bait tested by research vessel "Oregon"; appears promising for use by tuna fleet

THE pole-and-line fishery for tuna is dependent on adequate supplies of live bait, and the potential range of the tuna fishing vessel depends in part on the vessel's ability to carry large quantities of bait. The equipment used to capture bait and to preserve it alive varies from the simple net and row boat combined with a tank of noncirculating sea water used in the Cuban fishery to the very elaborate system on United States Pacific tuna clippers.

Recently a new-type trap lift net for catching tuna bait fishes was developed by the technical staff of the U. S. Fish and Wildlife Service exploratory fishing vessel *Oregon*. This net is operated from the fishing yessel, using lights to attract the schools of bait at night.

To date, the new net has been extremely successful in catching anchovies and other small bait species in the Gulf of Mexico. It eliminates the need for special bait boats and large bait seines, and seems promising for use by the commercial tuna fleet. It differs from ordinary lift nets in that it has the advantage of quick lift of the sides independent of lift of the bottom and frame of the net.

The *Oregon's* trap lift net was made with a frame of galvanized pipe having fittings arranged so that the net could be completely taken apart for convenient storage. The top and bottom squares, each 8½', were made of 1¼" pipe, and the 8½' verticals were made from ¾" pipe. The cotton webbing used was ½" (stretched) mesh with the floor hung on 12-thread manila for convenient attachment to the lower square of the frame. The top of the walls was hung on an 8' square frame of ½" galvanized rod. The method of rigging the hoisting and lifting lines is illustrated in Figure 1. No webbing was used as a cover for the top of the net since practically no fish of the types wanted escaped over the top.

Fishing with the trap lift net was carried on in 16 to 50' of water while the *Oregon* was at anchor, usually in the lee of an island. A 150- or 300-watt light mounted at the end of a 14' pole was used to attract the fish. The trap lift net was suspended in the water from the boom over the after lee rail with its sides down. The top of the frame was held from 6" above the surface to as deep as 8' below the surface, depending on the depth at which the bait schooled. The light was placed over the center of the net.

When a sufficient number of fish collected under the light, the sides of the net were lifted as rapidly as possible, and the frame was hoisted until the bottom was approximately at sea level. The catch was then scooped into the tanks and the net returned to the set position.

The largest catch with the lift net on the *Oregon* contained approximately 100 lbs. of fish, too large a quantity for proper handling except in calm seas. Possibly the Gulf of Mexico bait species are relatively less hardy and more easily injured than species generally used in the Pacific Coast tuna fishery. At any rate, less difficulty was experienced in catching the fish than in getting them into the bait tank in good condition. The scientists were successful in working the trap lift net in tidal flows of one to two knots and in winds of 18 to 24 miles per hour, but could not work the net effectively in swells or in a choppy sea.

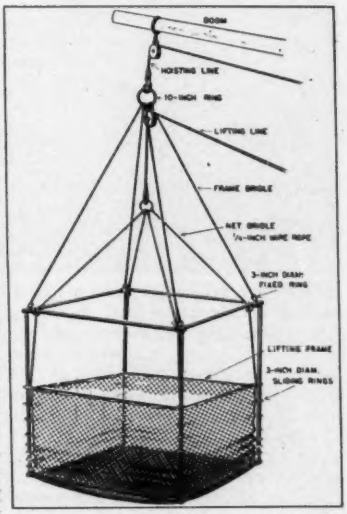

Figure 1—Construction details of the 8½' trap lift bait net used on the research vessel "Oregon".

Most Elaborate Bait System

It is said that United States Pacific tuna clippers have the most elaborate system in the world for capturing and holding bait alive. Essentially, when building a tuna clipper the owner is trading a large sum of money for the maximum amount of refrigerated cargo space, bait and fuel capacity, and other necessary items in a minimum length of vessel. Since the cost of the hull is predicted on the length, all space must be fully utilized for dual purposes where possible.

The equipment required for live bait on a tuna clipper consists of tanks to provide a space for a large quantity of bait to live, a water-circulation system to supply the

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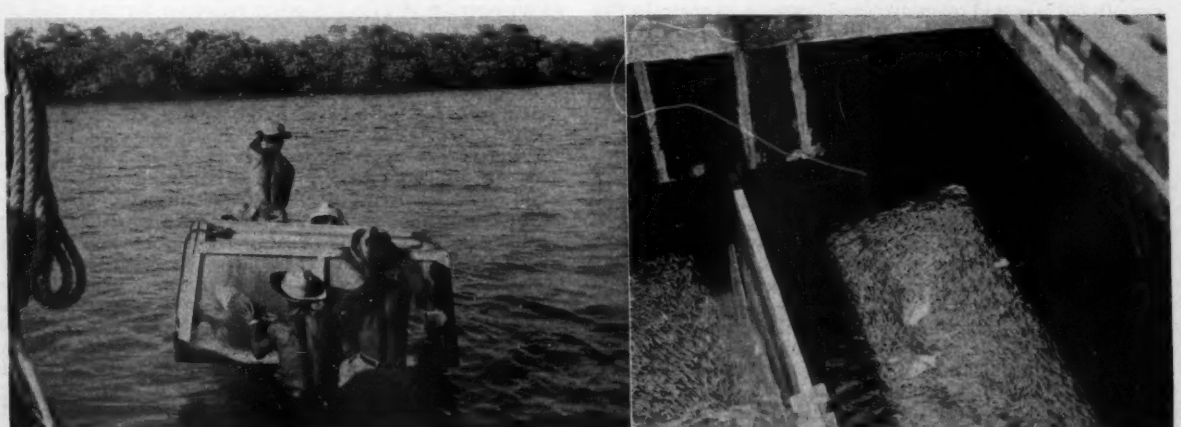
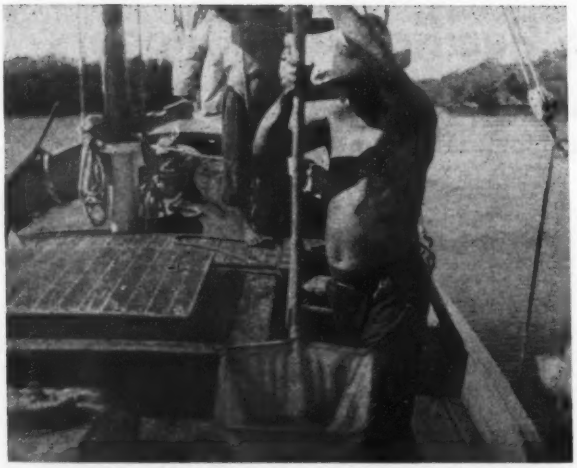


Left: the bait receiver used in a Cuban tuna fishing operation being taken to shallow water. Right: Majua in the bait well of a Cuban tuna boat. The equipment used by the Cubans to capture bait consists of a simple net and row boat. (Photos courtesy of Fish & Wildlife Service).



Transferring majua with a dip net from the bait receiver to the bait well on a Cuban tuna boat. A tank of noncirculating sea water is used by the Cubans to keep the bait alive. (Photo courtesy of Fish & Wildlife Service.)

necessities to sustain life, boats and gear to catch the bait, and facilities for transferring the bait from the nets to the tanks.

The structure of the tanks must be adequate for the weight of water plus safety factors for service at sea. Hatches at least 18" high are required to maintain a head of water to eliminate air pockets and prevent sloshing. Waterproof lights of at least 100 watts should be installed in the accessible sides of the tanks to permit the bait to mill properly at night. Portable or fixed lights over the hatches are also desirable. Smooth-surface screens with adequate openings to reduce the flow rate to limits which will not injure the bait are essential.

Considerable controversy exists among fishermen as to the amount of live bait which can be carried in a tank of a given volume. The amount of bait is probably dependent on a number of factors, including oxygen content, temperature, and salinity of the water; degree of abuse to which the bait is exposed between capture and deposit in the tanks; variations in the hardiness of the bait because of species, area or season of capture; and the proper design and manipulation of the tanks and circulation system. General practice is to place somewhat more bait in the tanks than is expected to survive and to remove the weaker individuals which die in the "rest period."

Design of Screens

The design of the screens in the bait tanks aboard a clipper is very important. They must have a relatively smooth surface and openings small enough to restrain the bait. But the open area must be adequate to admit and discharge the water at flow rates that will not injure the bait. Too rapid flow on the inlet side will affect the milling of the bait, while an excessive flow rate through the discharge side will draw the live bait or cause dead bait to collect and clog the screen.

Typical screens are made of ¾" waterproof marine plywood with ⅛" slots cut by a circular saw on 1" centers. Very little, if any, reliable published data is available on the optimum area of the openings, and fishermen may provide additional slots if the bait behaves improperly. One tank having a volume of 910 cubic feet was fitted with inlet and outlet screens having areas of 338 and 494 square inches respectively.

The deck bait tanks are of a general rectangular form to suit the available space, but the below deck tanks (or wells) are vertical on 3 sides while the fourth side and bottom conform to the shape of the hull. Water for the deck tanks is introduced at one corner behind the screen and allowed to overflow through a screen and baffle in an opposite or adjacent corner tending to create circulation in a horizontal plane.

Water for the below deck tanks is admitted at the bottom on the shaft alley side and allowed to overflow in the upper outboard side tending to create circulation in a vertical plane. The flow of water to the tanks is throttled by a valve. On the deck tanks the overflow is governed by the height of baffle boards which are set to maintain a constant level of water in the hatch. The rate of discharge and the consequent level of water in the hatch in the below deck wells is controlled by a through-deck valve behind the discharge screen.

Pumps and Piping

The pumps for supplying sea water to the tanks are of the vertical-impeller type designed to deliver large volumes at low head pressures. High head-pressure types are undesirable because of the possibility of churning and separating dissolved gases from the water. The sea chests for the pumps are located near the keel and close to amidship to permit the suction of water that is the least disturbed by the vessel when cruising.

It is considered best practice to have pumps with a performance capacity capable of delivering enough water to change the contents of the tanks 5 to 7 times per hour. To achieve this performance, a safety factor of at least 2 should be considered for the water can be throttled by the tank supply line valves.

The importance of live bait to the clipper dictates the installation of dual pumps either of which can carry the load for most of the tanks. The pumps discharge to a header on each side with a crossover connection to permit using one or both pumps for the entire system. Each take-off to a tank is fitted with a valve for governing the flow or for isolation of the tank.

Most of the bait is taken in sheltered areas along the coasts of Mexico and Central America. Consequently, small boats are suitable and desirable for the bait is frequently found in water too shallow or too dangerous for the clipper to enter. In this connection it should be mentioned that if the bait-pump intakes are too close to the bottom, mud may be drawn into the tanks causing undue mortality of the bait.

Three boats are used to find and capture bait: a power speedboat capable of speeds up to 30 or more miles per hour, a net skiff, and a "dry boat." The powerboat may be fitted with an automatic depth sounder to aid in locating the bait. Powerboats vary from 16 to 18′ in length, 4 to 5′ in beam, and are powered with a high-speed gasoline engine from 100 to 150 hp. Some are fitted with reduction gears permitting the use of larger diameter propellers to reduce slippage when towing the net and dry boat.

The net boats are from 16 to 18′ in length, from 6 to 7′ in beam, and from 20 to 30" in depth. The dry boats are flat-bottom skiffs about 12′ in length and are used to hold the end of the net while setting and to support the fish bag. Two men are required in the speedboat—one serves as an operator while the other searches for bait and directs the fishing operation. From 6 to 8 men are required to set and haul the net. When not in use the boats are carried in nests aboard the clipper.

Lampara Nets Used

Most of the bait is caught in hand-operated lampara nets varying from 130 to 160 fathoms in length and from 50 to 75′ in depth at the bag. The end meshes in the wings vary from 5 to 8" (stretched measure) and gradually diminish in size to ½" (stretched measure) mesh in the bag. The lampara nets are lightly floated and leaded in the wings, about one cork and one lead every 12 to 18"; but they are heavily buoyed and leaded in the bags, about 3 corks alternating with a 6" space, and the bottom line is almost solidly leaded at the throat. This type of net is used along the mainland for day fishing in shallow water or at night in deep water when the bait can be located by phosphorescence.

A smaller fine-mesh net from 125 to 150′ in length and 20 to 30′ in depth is used for capturing bait in the clear waters near the rocky shores of the Galapagos Islands.

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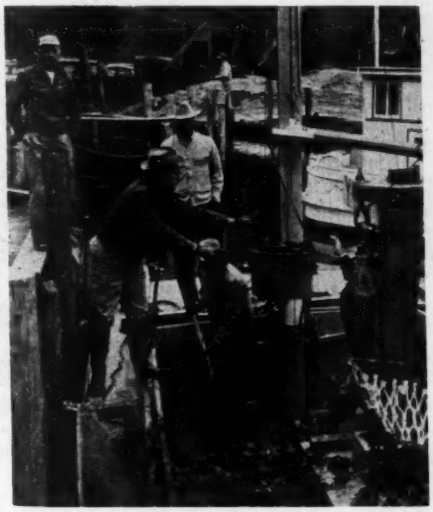
Advantages of Producing Seed Oysters Inshore

Dr. V. L. Loosanoff* says shallow areas yield good sets more regularly and furnish protection against storms and enemies



Left: With oyster tonging skiffs still in tow, one of the York River (Va.) Oyster Corporation's larger boats is tied to the wharf as the catch is loaded on a truck. Right: Unloading of oysters from the firm's "Sea Rac No. 1". The York River Oyster Corporation produces in the neighborhood of 75,000 bushels of oysters annually from the York River. Where the ground is firm, the Corporation plants seed oysters which are ready for harvesting in two to three years' time. Loads of shells are dumped in other areas to create a hard bottom, to which the oyster spat can attach themselves.

RECORDS show that between 1904 and 1925, a period of 21 years, not a single general, heavy set of oysters occurred in Long Island Sound. During this time the industry survived by buying abundant seed oysters that grew on so-called natural beds which were located mostly in shallow inshore waters. Since 1925, there have been good sets only in five years—1930, 1939, 1940, 1944 and 1945.

In other words, Long Island Sound oystermen have in the last 54 years, had only six or perhaps seven good, general sets. The remaining years were either complete failures or so-called marginal years, during which a general, light set occurred in the Sound, or when good sets occurred only in certain sections. This year the oyster industry suffered another setting failure, and as a result oystermen are in need of young oysters.

If a farmer gathered a commercially-profitable crop only every eighth or ninth year, how long could he continue to exist, and should he not look for other tracts of land where more regular and more abundant crops could be grown? I think he should, and the Connecticut oyster industry, imitating a wise farmer, also should consider the possibility of transferring a substantial portion of its seed oyster production operations from the open waters of Long Island Sound to more promising areas. I do not advocate a complete change, i.e., abandonment of the oyster beds in Long Island Sound proper. I merely suggest the extension of our oyster cultivating efforts into shallow, more protected waters where the conditions for production of seed are more promising.

Uncontrollable Conditions

Most of the conditions affecting the oyster industry in Long Island Sound proper are virtually uncontrollable. These conditions may be either of physical or biological nature. The most outstanding examples of the former are our highly destructive storms. The industry still remembers that of November, 1950, which killed millions of oysters and ruined many beds. Nothing could have been done to prevent this catastrophe because the storm came without warning.

Of the biological factors we would probably think, first of all, of such well known enemies as starfish and drills. It is true that they may be eliminated from small areas by the persistent use of lime, mops or suction dredges, but they will continue to invade the beds from the surrounding grounds which remain uncleaned. Furthermore, as is well known, starfish have pelagic larvae, which are carried around by the currents and which may set in immense numbers on an oyster bed no matter how bare of adult starfish the bed may be.

We know of several formerly extremely productive oyster setting areas which eventually were given up because it became economically unprofitable to defend these beds against the enemies.

Thus, it is clear that the open Sound is not only an unreliable place for getting sets regularly but also a place where if the set does occur, it remains difficult and expensive to protect it against enemies. The question that naturally arises because of these considerations is what the industry could or should do to place itself in a more advantageous situation. The answer may be that a partial solution of this problem could consist in the utilization of numerous bays, harbors and deltas of rivers where extensive natural beds of oysters existed in the past, but which at present are barren and useless.

Our observations, as well as those of our predecessors in biological phenomena, show clearly that oyster set rarely fails in inshore waters. We estimate, for example, that in Milford Harbor and Indian River, if these waters were properly planted and managed, a set of commercial importance could be gotten nine out of every ten years. Furthermore, beds located in bays and harbors would be better protected against storms.

Finally, because the salinity of the water in many inshore areas is comparatively low, the oysters, especially young set, would be protected by nature itself against starfish and drills, which require a comparatively high salinity to exist and propagate. This consideration alone is of tremendous practical significance because it eliminates from the debit side of the companies' ledgers astonishingly high sums of money spent on pest control.

Effect of Pollution

A criticism of our suggestion may be offered by pointing out that most of the inshore waters are more heavily

(Continued on page 41)

* Dr. Loosanoff is director of the Fish & Wildlife Service Laboratory at Milford, Conn. The accompanying article is based on a paper he presented at the recent Oyster Convention in Boston, Mass.

Atlantic States Commission Meets in Baltimore

Favors banning uncertified foreign shellfish, and discusses possible research projects under Saltonstall-Kennedy Act

THE Atlantic States Marine Fisheries Commission, at its 13th annual meeting held October 4-6 in Baltimore, Maryland, unanimously adopted a resolution expressing officially its conviction that foreign shellfish which does not meet the sanitary standards required of domestic oyster and clam producers should be kept out of the country.

Wayne D. Heydecker, secretary-treasurer of the Atlantic States Marine Fisheries Commission.

The resolution does not affect Canada because that nation already has a working agreement with the United States on shellfish sanitation and requires its producers to meet the same high standards required of shellfish producers in the U. S. Adoption of the resolution came after commissioners from shellfish-producing States had expressed the fear that importation of uncertified shellfish might result in harm to the consuming public which in turn might not differentiate between certified and uncertified shellfish products.

The Commission unanimously elected Charles M. Lankford, Jr., Virginia Fisheries Commissioner, as chairman for the coming year. Chosen as vice-chairman was John Miller, shrimp producer of St. Mary's, Georgia. The secretary-treasurer of the group is Wayne D. Heydecker.

Section chairmen were elected as follows: North Atlantic Section, John B. Bindloss of Stonington, Conn., retiring chairman of the Commission; Middle Atlantic Section, Assemblyman E. T. Barrett of Bayshore, N. Y.; Chesapeake Bay Section, Arthur H. Brice, chairman of the Maryland Department of Tidewater Fisheries; South Atlantic Section, G. Robert Lunz, director of Bears Bluff Laboratories, Wadmalaw Island, S. C.

Asks Rebuilding of Laboratory

The Commission renewed its request for the rebuilding of the 70-year-old laboratory of the Fish & Wildlife Service at Woods Hole, Mass., badly damaged by four hurricanes two of which last month carried away the docks. This modernization, said the Commission, is urgently needed for important research in the States of the North Atlantic and Middle Atlantic Sections and for the International Commission on the Northwest Atlantic Fisheries.

At the request of the same two Sections the Commission urged the Fish & Wildlife Service to initiate biologic studies of scallops, whiting and menhaden and to investigate the causes of recent oyster mortality. It also asked for studies on the economics of the sea scallop industry, effects of dragging on the bottom, extension of the present technological program in New England waters dealing with exploratory fishing and freezing whole fish at sea.

A Middle Atlantic Section request that funds from the Saltonstall-Kennedy Act be made available under an equitable system of apportionment to competent State research agencies, was endorsed by the Commission. The Middle Atlantic Section accepted in principle a proposal that State fishery agencies in New York, New Jersey and Pennsylvania be authorized to cooperate with each other and to adopt flexible regulations covering all species of fish that go up the Delaware River to spawn.

A resolution recommended by the Chesapeake Bay Section opposing a reported plan to dump anthracite coal mine waste or any other industrial wastes into the Chesapeake Bay or any of its tributaries, was adopted. Also endorsed at the petition of the South Atlantic Section was a request to the Fish and Wildlife Service to extend the shad program which in its first six years has contributed much valuable data, and to enlarge and carry on the economic and marketing study of shrimp just begun.

Urges Study of Vessel Design

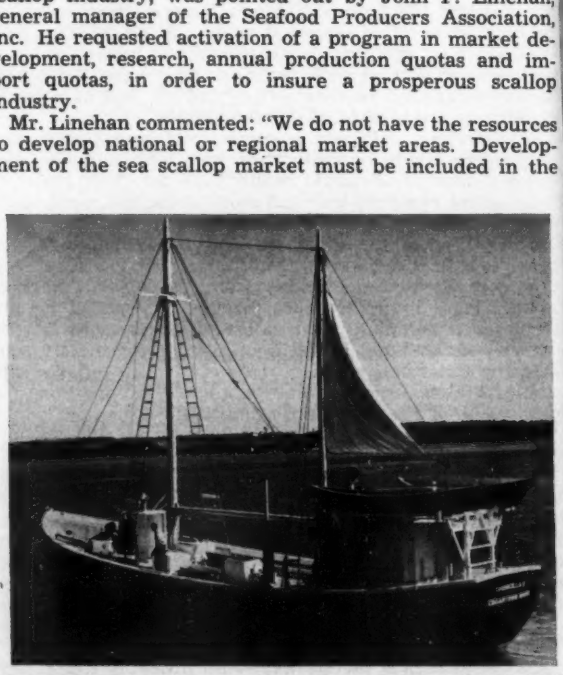
Francis W. Sargent, director of the Massachusetts Division of Marine Fisheries, spoke in favor of a general research project on vessel and equipment design. Sargent expressed a belief that the accident rate aboard fishing vessels is one of the basic problems of the industry. He suggested an intensive study by engineers would eliminate or minimize the dangers from exposed cables, winches and other deck gear.

Mr. Sargent also said he hoped that the whiting study which is being conducted by the Woods Hole, Mass. fishing boat *Priscilla V.*, under charter to the Fish & Wildlife Service, can be completed in a few months. The Massachusetts Marine Fisheries Director added that he is particularly gratified that Maine's representatives have agreed to the research into mesh size for whiting nets, with a promise they will work for companion fishery laws once the best net size is determined. The whiting research program also calls for a long-range biological study of the fish to determine how their numbers can be increased.

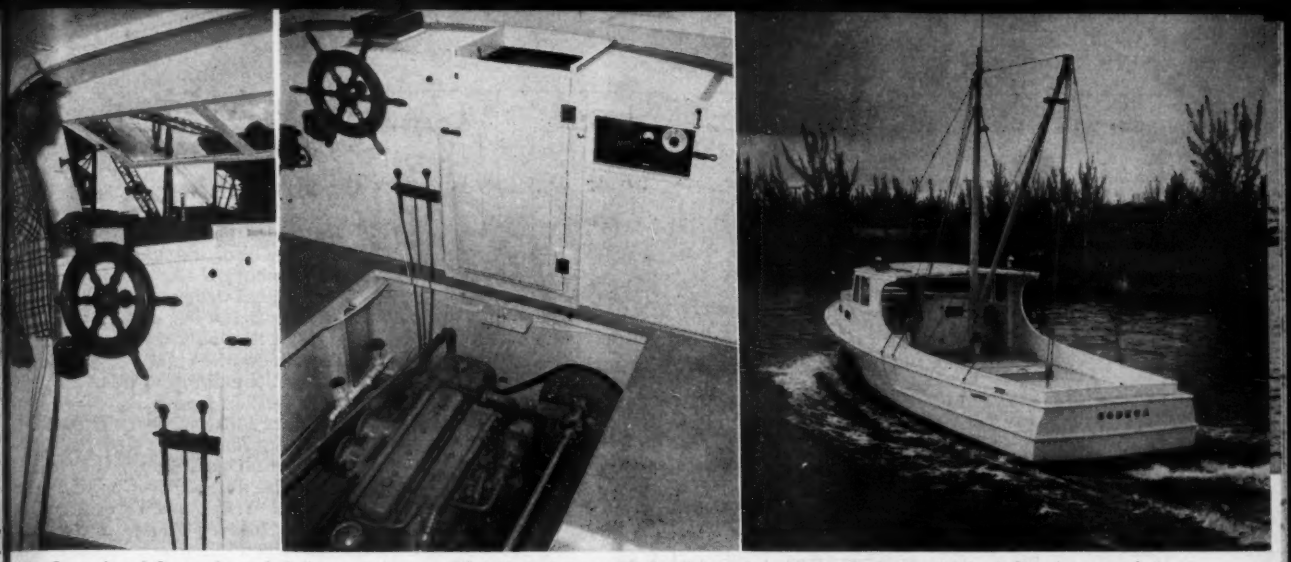
Scallop Research Requested

Need for a four-point program supported by Saltonstall-Kennedy Act funds to aid the New Bedford, Mass. scallop industry, was pointed out by John F. Linehan, general manager of the Seafood Producers Association, Inc. He requested activation of a program in market development, research, annual production quotas and import quotas, in order to insure a prosperous scallop industry.

Mr. Linehan commented: "We do not have the resources to develop national or regional market areas. Development of the sea scallop market must be included in the



Research on the mesh size of whiting nets is being done by the 60' Woods Hole, Mass. dragger "Priscilla V.", which is under charter to the Fish & Wildlife Service. She is owned by Capt. Jared Vincent.



Left: Capt. Angel Cruz, who took delivery of the new 38' inshore shrimper "Godeca" from Auto Marine Engineers of Miami, Fla., for owner Luis del Campo of Havana, Cuba. Center: the vessel's Model DIXEC Hercules Marine Diesel, rated 115 hp. Right: "Godeca" under way on her trial runs in the Miami River.

overall U. S. Fish and Wildlife Service market development program.

"Neither does the sea scallop industry have the resources to carry on its own biological or technological research, and no Federal money has ever been appropriated for either. Two problems are facing us and can best be put forth in the form of questions:

1. Are we overfishing the sea scallop fishery?
2. Can our equipment be made more efficient and economical?

"More efficient drags have been developed, more powerful engines have been installed, and new navigational devices have been adopted, but the yield per unit of effort has remained relatively level, even though by logical conclusion it should have increased considerably. This fact leads us to assume that the stock is being depleted. An extensive biological research program will provide us with the correct answer.

"The establishment of an annual production quota or limit running from March 1 to March 1 and revisable yearly would discourage production and market speculation and assure a steady market. As the market developed it would provide for a normal expansion of the fleet and encourage sound investment.

"Overriding the market development factor would be the results of the biological survey. It may well come to pass that the results of the research will lead us to curtail our production. In the meantime, an annual production limit of 20,000,000 lbs., the 1953 level, should be imposed at the earliest practical date.

"In 1948, a total of 500,000 lbs. of sea scallops were imported. Three years later, in 1951, almost 750,000 lbs. were imported—an increase of 49 percent for the three years.

"In 1953, about 1,333,000 lbs. were imported—an increase of 82 percent over the two previous years and an increase of 170 percent for the five-year period. Now is the time to take steps to protect our scallop industry.

"That protection must be a flexible quota limiting imports to 10 percent of the domestic production, which is a higher percentage than was imported in 1953. Such a flexible quota would be fair to both the foreign producer and the American producer. The gap between the present import figure and 10 percent would provide for the expansion of the foreign fleets. The flexible quota would guarantee, however, that the foreign fleets would not be built up at the expense of the American producers."

Trash Fishery Study to Be Made

A thorough study of the southern New England trash fishery in an attempt to settle the question of whether that industry is causing depletion of various species of edible fish, particularly yellowtail flounder, will be undertaken soon by the Fish and Wildlife Service.

Starting about January 1, according to Dr. Lionel A. Walford of the Service, four men will be assigned to the project on a full-time basis. The study will involve a detailed examination of loads landed at the three principal trash fish ports—New Bedford, Mass., Point Judith, R. I., and Stonington, Conn.

New-Type Inshore Shrimper "Godeca" Joins Cuban Fleet

Craft has open wheelhouse, and is built of white cedar

With her 38' length and 11' beam, the low sleek lines of the new-type inshore shrimp trawler *Godeca* give her the appearance of a pleasure craft instead of the sturdy fishing vessel that she is. The shrimper will join the fleet of Luis del Campo of Havana, Cuba, and more boats of her type are being built for fishing in the West Indies.

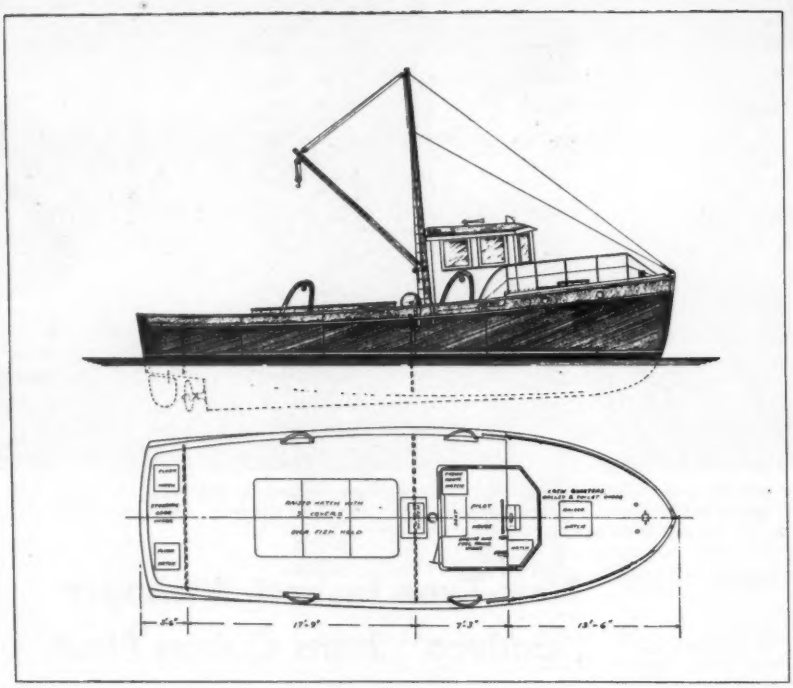
The *Godeca* was packaged by Auto Marine Engineers of Miami, Fla., her hull having been built in the shipyard of R. B. Gillikin at Marshallberg, N. C., after which she was brought to Miami and finished at the Riverside Boat Works.

Planking on the *Godeca* is 1" select white cedar, and the 2 x 4 yellow pine ribs are steam bent. The keel is of select Carolina yellow pine, and the fish holds can store 25 boxes of iced shrimp.

Equipment on the *Godeca's* spacious deck and in the open wheelhouse includes an Apelco radiotelephone and a special hoist, both supplied by Auto Marine Engineers. The steering wheel was furnished by J. M. Keely Sales Co., and the fire extinguisher system is a Lux CO_2, with several hand Pyrene extinguishers at convenient spots.

Hatch covers in the wheelhouse open to reveal the Model DIXEC 6-cylinder Hercules marine Diesel, rated 115 hp. The reduction gear is of Paragon manufacture, and the engine turns a Columbian Bronze shaft and 22 x 18 Columbian propeller. There is a Walter Clean Flo keel cooler, and a Twin Disc power take-off supplies power for the trawl hoist.

Other equipment in the engine compartment includes Marine Products fire and bilge pump. Southway batteries are used for starting, and the vessel carries 400 gals. of fuel oil in two tanks. The fresh water tanks are located aft to give the shrimper a better trim.



Design for Small Steel Dragger with Double Chine

The accompanying plans by William J. Deed, naval architect of Perth Amboy, N. J., are for a 42' x 14' x 4' steel dragger with hold capacity for 25,000 lbs. of iced fish. The boat has a ruggedly-constructed steel hull, with double chine, which makes her very little different from a round bottom hull in form.

Specifications call for a Diesel engine of approximately 165 hp. with 2:1 reduction gear and power takeoff for the hoist. The engine and fuel tanks with capacity of 800 gallons are located under the pilothouse. Crew quarters, galley and head are forward.

Although most fishing boats of 42' are of wood construction, the steel hull is favored by some fishermen because of its slightly greater interior cubic capacity, integral fuel and water compartments, steel watertight bulkheads and slightly lower cost.

Food Editors See New Fishery Products at "Fish Fair"

Sixty fishery products, twenty-five fish and shellfish dishes, table cooking equipment, serving platters of modern design and a new cook book were the features of the "Fish Fair" held for food editors at the Waldorf-Astoria in New York City October 7. The Fair included seven tables of all kinds of fish cookery, and was sponsored by the National Fisheries Institute and the Shrimp Association of the Americas. E. M. Concannon, president of the Institute, Charles Jackson, general manager, and Murray Wheeler, public relations director, were among the hosts.

Fish and shellfish items ranged all the way from the newest and very successful product, fish sticks, to cod and haddock, salmon and tuna, which have been the backbone of the fishing industry since Colonial days—from ready-to-cook shrimp to whole fish which has to be dressed—from Florida's pompano to Columbia River salmon.

All finished dishes were made from recipes in "James Beard's Fish Cookery". Mr. Beard, well-known food authority and cook book author, was present at the exhibit to tell food editors about the research which went into his book (published recently by Little, Brown and Co., Boston, Mass., $4.95).

In "Fish Cookery", Mr. Beard describes some 90 fish and shellfish species, alphabetically section by section, and gives authoritative recipes for each. Also included is easily-understood information about buying and cooking fish and shellfish, serving wines with fish, making sauces, stews and chowders.

E. M. Concannon, president of the National Fisheries Institute, serves Crab Gumbo to Cissy Gregg of the "Louisville Courier-Journal and Times", at the Fish Fair sponsored by the N. F. I. and the Shrimp Association of the Americas. Others at the table are Eleanor Lee of the "Washington Post" and Kay Savage of the "Detroit Free Press". The Fish Fair was part of the Food Editors Conference held the week of October 4 at the Waldorf-Astoria, New York.

Experimental Clam Hybrids Planted Along Atlantic and Gulf Coasts

A new clam hybrid developed at the Milford, Conn. Fisheries Laboratory under the direction of Dr. Victor Loosanoff has been distributed to a number of biologists along the Atlantic and Gulf Coasts. These clams have been planted in different areas where they can be observed.

Scientists participating in the mass test are J. B. Glud, Boothbay Harbor, Me., Mr. Loosanoff, H. H. Haskin, Delaware Bay, J. B. Engle, Chesapeake Bay, W. A. Chipman, Beaufort, N. C., G. R. Lunz, South Carolina, and Philip A. Butler on the Florida West Coast.

The hybrid clam is a cross of the East Coast hard clam and the Southern hard clam. The testing experiment started this Spring, and 4 batches of 500 clams were planted in each area listed above. Pure strains of the East Coast hard clam and the Southern clam made up two lots, with the other two from the crosses.

In the experiment on the Chesapeake Bay, examinations after several weeks showed substantially faster growth already of the hybrids than in the controls. These experiments may help to develop faster-growing clams.

Boston Trawlers "Comet" And "Swallow" Have Two-Level Engine Rooms

TWO of the trawlers that maintain a high payload average for the U. S. Shipbuilding Company's Boston, Mass. fishing fleet are the *Comet*, commissioned in February 1951, and the *Swallow*, put into service a year later. Each measures 104' from stem to stern, with a 26' beam.

An outstanding feature of both vessels is a two-level engine room with the main engine on the lower level and all accessories, such as auxiliary engines and compressors, confined to the upper level. This arrangement greatly reduces the clutter that is typical of a single-level engine room, in which an engineer is forced to leave his station to check his strung-out equipment.

In the two-level room, the engineer's maneuvering is limited to a small area on the upper level. He easily can check or replace engine parts by simply stepping down into the lower level. An additional convenience is that most piping is installed in the space between the upper and lower levels, thus keeping it out of the engineer's working area.

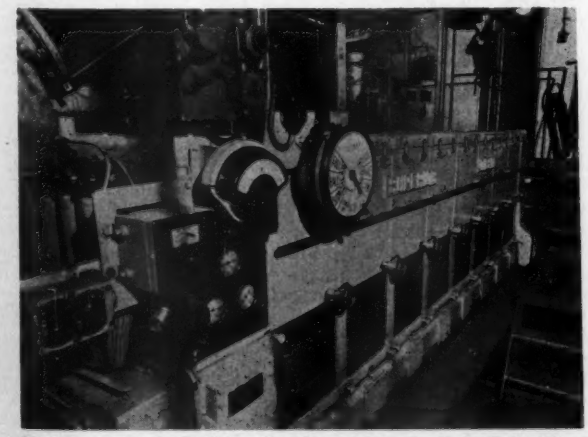
During World War II, the U. S. Shipbuilding Co. built over 300 boats of this engine room design for the Army and Navy. They were used as towboats and for carrying freight and passengers. Although the Company is now principally concerned with its fishing fleet, it continues to maintain shipyards in Boston and Yonkers and Brooklyn, N. Y.

The main propulsion engine of both the *Comet* and *Swallow* is a 500 hp. Superior Diesel, operated at 400 rpm. and providing a speed of 9½ knots. The engines are completely enclosed, making the operation cleaner and quieter, and also protecting the below-decks crew from hot or moving parts, a hazard in rough weather.

Built to Rigid Regulations

The *Comet* and the *Swallow* were built under regulations of the American Bureau of Shipping, which require a very exacting inspection of the engines and the engine parts and installations. The Coast Guard also inspects the vessels. Both boats operate on direct drive through a 7½-inch, 10-foot shaft.

The trawlers have crews of 17 each, consisting of a captain, mate, 1st and 2nd engineer, cook, and 12 crewmen. Speed and displacement of each are the same going out and coming in. Heading for the fishing grounds, each trawler carries 12,000 gallons of fuel, 6,000 gallons of water, and 40 to 50 tons of ice. The fish caught replace the weight of the fuel and water used.



Engine room of the 104' "Swallow", trawler in the U. S. Shipbuilding Company's Boston, Mass. fleet, showing her 500 hp. Superior Diesel with cover plates removed.

Shown coming into Boston Harbor is the 104' trawler "Comet", a U. S. Shipbuilding Co. fishing vessel commissioned in 1951, and powered with a 500 hp. Superior Diesel.

The *Comet* and *Swallow* fish entirely for haddock and cod in the North Atlantic. To bring the fish from the bottom they use trawl nets raised by Diesel electric winches, that lift as much as 20,000 lbs. of fish at a time.

The schedule of the U. S. Shipbuilding Company trawlers calls for 25 to 27 trips a year. According to Howard Francis, port engineer, the vessels are overhauled and repaired only about every two years, which is considered an excellent record. Mr. Francis figures that one of his Company's trawlers would start losing money at the rate of $400 a day as soon as it was tied up to the dock.

"My crew takes over when one of our vessels arrives in port," he explains. "We really go to work, never resting a second until, on the third day, we have the vessel under way for another catch."

During that short interval, the payload of 100,000 to 200,000 lbs. of haddock and cod must be sold and removed from the hold, new supplies of fuel, ice, food, and water must be put aboard, and the vessel must be made ready in all respects for another 250 to 750-mile run.

Cape Cod Whiting Tagged Off Race Point

Additional study of whiting is being conducted by the Woods Hole Laboratory of the Fish & Wildlife Service in order that the Service may make future recommendations of a standard mesh size.

More than 100 whiting were caught and tagged by Woods Hole scientists off Race Point, recently. The tags used were red gill discs. A laboratory spokesman asked that fishermen be on the lookout for the tags, which may be turned over to Frank Reilly, Provincetown agent of the Fish & Wildlife Service, or be mailed to the Woods Hole or Washington office of the Service.

Wellfleet Scallopers Getting Limit

As of the latter part of October, Wellfleet scallop fishermen were continuing to bring in their limit daily. The average number of boats going out was 13, and the quota of 20 bushels a boat was still being brought ashore, although many boats were working until mid-afternoon.

Scallop Areas Closed

The waters of Eastham and Orleans in Cape Cod Bay were closed to commercial scallop fishing on October 4 and will remain closed indefinitely until a majority of the shellfishermen of the towns petition for a reopening.

The action was taken by the fishermen themselves after returning from their fishing to find that buyers had dropped the price to a low of $3.50.

Otto L. Kuehn Company's 54' "Penguin" which carries freight between Apostle Islands and Bayfield, Wis., and fishes herring in the Fall. She has a 120 hp. Kahlenberg engine.

Great Lakes Fishermen Making Good Herring, Pike Hauls

With catches of lake herring getting larger, generally, toward peak of the annual spawning run, and better-than-last-year takes of blue pike being had from Lake Erie, production of these species of fish is impressive.

Though lake trout hauls aren't considered up to normal, there is a good chance for an average year despite the inroads of the sea lamprey. Most of the trout are coming from Lake Superior.

Before the season on whitefish closed, takes of these were fairly substantial, with best hauls coming from Lake Superior. Herring yields were good in most of the Chequamegon Bay area, where Ashland, Bayfield and Cornucopia, Wis. fishermen operate, and in the Duluth area fairly good hauls were being made.

Around Apostle Islands area, netters made some nice catches of whitefish. Trollers were waiting for the trout season to reopen Nov. 4. At Ontonagon, Mich., commercial fishermen were doing fair on trout, and better on whitefish.

Dormer Fish Company's herring fleet at Chassell, Mich. is expected to produce enough herring for a sizable herring pack at the plant there. Catches have been good.

At Marquette, Munising and Grand Marais, Mich., producers were getting better catches of whitefish. Many larger operators will turn to gill-netting of lake trout on Nov. 4.

Whitefish Bay fishermen, which includes Brown Fisheries, were covering commitments on whitefish, and now are fishing heavily for herring. Brown's crews are expected to turn to lake trout netting again on Nov. 4.

Green Bay fishermen from Two Rivers, Marinette, Menominee, Escanaba, Gladstone, Manistique and Washington Island have been fishing for lake herring. Walleye, smelt, and menominee catches have been light. This may be due to the herring activity.

On Lake Michigan, Chicago, Waukegan, Milwaukee and Sturgeon Bay producers on the West Shore were getting nice yields of chub. In November, however, they turn to the taking of herring, perch or walleyes as well as "rough" fish.

Good perch takes were reported off Grand Traverse Bay, Omena, Northport and Beaver Island, Mich. Herring yields also were in commercial quantity in the usual areas of the Straits of Mackinac.

On Lake Huron many of the producers have turned to herring fishing. Saginaw Bay producers who sell their herring at Bayport, Mich., were getting good catches. Bullheads by trot line fishermen were in fairly good supply, and lake perch hauls have been fair.

On Lake Erie, blue pike, perch and yellow pike were in good production. The Fishermen's Cooperative at Port Dover reported boats were averaging from 500 to 1,000 lbs. of blue pike daily. Part of the Port Dover fleet is fishing out of Port Burwell, Ont.

At Ashtabula, Ohio and Dunkirk, N. Y. blue pike, perch and yellow pickerel were probably providing the best catches, while carp and yellow pike were furnishing the heaviest catches in the Sandusky, Ohio area.

Angwall Buys Dormer Plant

Capt. Orin W. Angwall, Marinette commercial fish dealer for 30 years, has taken over the Dormer Fish Company in Menominee, Mich. Angwall and his son, Robert, purchased all stock in the Dormer Company from Ralph W. Wells, who has owned it since 1940. The Angwalls plan to build an addition to the Dormer plant next year.

Fred Klaus, who has been manager of the Dormer plant for 30 years, will continue as secretary and treasurer of the new company and plant manager. The Dormer plant has four coolers of various capacities from 10,000 to 15,000 square feet, and a processing and packing plant for herring.

Also included in the sale are a 10-boat fishing fleet and fish house at Portage Entry on Lake Superior. Robert Kallianen will continue to manage the Portage Entry plant.

Capt. Angwall said the Angwall fisheries would be moved from Marinette to the Dormer plant in Menominee, and the entire fishing operation would be conducted out of the one plant.

Chequamegon Bay Walleyes

Lake Superior sport and commercial fishermen may sometimes wonder just who is getting what share of the walleye population in the Chequamegon Bay area. Adult walleyes have been marked and released in this area in 1947 and in 1953. In the six-year period following 1947, Russell Daly, fishery biologist, reports that commercial fishermen caught one tagged walleye for every three tagged walleyes taken by sport fishermen.

Ohio Fish Production Increases

The 1953 annual harvest of fish taken from Ohio waters of Lake Erie, compared with the 1952 yield showed increased takes of blue pike, cisco (herring), white bass, yellow perch, yellow pickerel, and buffalofish. The total catch was 22,951,160 lbs. in 1953, against 21,246,640 lbs. taken in 1952.

Lake Ontario Fishermen Meet

The executive committee of the Eastern Ontario Fisheries Assoc. met in Picton, Ont. recently under chairmanship of Stanley Rankin, president. Problems discussed were requests for a 2-week extension of spring eel fishing and the reopening of some Lake Ontario Bays for commercial fishing.

It was also decided to recommend an extension of hoop-net fishing for eels in South Bay until May 31. It was reported that many large-size yellow pickerel are preying on whitefish in Lake Ontario waters.

Smithers Returns to Booth Fisheries

Booth Fisheries Corporation has announced the appointment of Wilson Smithers as manager of its Chicago wholesale branch. Mr. Smithers replaces Godfrey Holm, who has been with Booth for the past 41 years, 25 of which he served as manager of the Chicago wholesale branch. Mr. Holm will remain in the employ of Booth Fisheries, but due to ill health will be assigned less exacting duties.

Mr. Smithers is a former employee of Booth Fisheries, having served in various capacities from 1921 to 1933, when he resigned to assume the presidency of Robbins Co., Inc., the American subsidiary of British-Columbia Packers, Ltd. He subsequently resigned from that office to assume an executive position with Shapiro Fisheries of Chicago.

Florida Fishermen Favor Shrimp Size Regulations

Growing concern over possible depletion of the Tortugas shrimp beds has the industry at Key West asking for legislative curbs on fishing practices. Jack Thompson, president of Thompson Enterprises, and Mike Lanasa, of Lanasa & Wexler Shrimp & Seafood attribute the lower production to too many catches of small shrimp. Many shrimp are being taken which weigh in at 80 to 90 per pound without heads.

C. P. Idyll, research associate at the University of Miami, lists the following regulations as a possibility:

Establishing a specific count of shrimp to the pound, which would, of course, regulate size.

Prohibit fishing activity in areas where small shrimp are normally caught.

Allow no fishing during certain times of the year when undersized shrimp are known to be plentiful.

Limit the size of the net mesh. The size of the shrimp caught would be directly proportionate to the size of the mesh.

A. E. Fagen, Sr., A. E. Fagen, Jr., Manuel Versaggi and Donald Sahlman, speaking in Tampa last month, reported that the shrimp price has dropped from a high of 90 cents eight months ago to as low as 42 cents. The shrimp men blame the situation partially on the large number of boats working in the Gulf, and on the large surplus of frozen shrimp that is now being unloaded on the market.

The men believe the present shrimp supply on the Campeche Banks off Mexico will last indefinitely, because the stock is always being replenished from places where it is impossible for the shrimp trawler to fish.

Mullet Industry Survey

A statistical survey by the Florida State University Economic Department of Florida's most important food fish, the mullet, has resulted in a surprising find on the independence of sales in regard to price changes. Higher prices do not seem to curtail sales or lower prices to stimulate them. The survey indicated difficulties in profitably disposing of a large mullet catch.

Since mullet lose flavor rapidly after being caught, studies are being done on better ways of preserving the fish and making them appeal to more consumers. Dr. Marshall Colberg who directed the survey thinks a more attractive name for the fish might help the industry.

Rescues Crew of Lost Shrimper

A Tampa shrimp boat, the *Jean LaFitte*, last month brought in the three crewmen of the Tampa shrimper *Kim* which sank off the Campeche Banks. On the way to port she was requested to go to the aid of another shrimper, the *Briny Marlin*, also from Tampa, which was reported out of fuel.

Capt. Reddin Brunson's 43' party fishing boat "Barbara Ann" of Destin, Fla. She is equipped with 115 hp. Chrysler gasoline engine, 18 x 16 Columbian propeller, 15-watt Apelco radiotelephone, and Raytheon Submarine Signal Fathometer. Her speed is 10 knots.

Capt. James J. Mitchell, designer of the Hatteras Trawler, wading around the Morehead City (N. C.) Shipbuilding Corporation's yards on October 15, a couple of hours after Hurricane Hazel had moved on toward Pennsylvania, New York and Canada. The sheds, shops, yards and offices of the shipyard were from two to five feet deep in water. Some lumber and other material floated away, but three days after the hurricane the yard was back in full operation.

Shrimper Sinks off Mexico

The Tampa shrimp boat *Santa Lucia*, owned by S. Felicione and Sons, was reported to have exploded and sunk in waters off the Mexican coast on October 14. All crew members escaped injury.

New Smoked Fish Plant

The Florida Smoked Fish Co., Miami's newest industry, has installed what its owners describe as the South's largest smoke house in its new building. The owners are Irving and Gerald Ostrover and Bernard Oxenberg, whose families have been in the smoked fish business in New York City for more than three generations.

North Carolina Shrimpers Resume Fishing after Hurricane Repairs

Following completion of repair work on storm-damaged vessels, six Southport trawlers went out on October 18 and the *Penny*, owned by Capt. Merrit Moore and skippered by Capt. Clarence Varnum, topped the limited fleet with a catch of 20 bushels.

Late last month it was expected that nearly every trawler would be back in operation, as a result of the efforts of several Sunny Point contractors who refloated them with their powerful equipment. Few of the boats were damaged to any great extent.

Report on Summer Fishing Season

C. G. Holland, Assistant Commercial Fisheries Commissioner, has released a report covering commercial fishing in North Carolina waters for the three months ending September 30. The quarter saw very little production of seafood, especially finfish. The shrimp catch was below normal due to the dry season and the two hurricanes.

There was a large run of Spanish mackerel the latter part of September through the first week of October, but due to the unusual number of shark the fishermen were unable to work over one night a week, having to mend the shark holes in their nets the rest of the time.

Licenses have been issued to 2,615 boats this year, and 437 oyster leases are in force which have an acreage of 4,308, or an approximate average per lease of ten acres.

Connecticut Laboratory to Get Oyster Research Funds

The Federal oyster laboratory at Milford will get an extra $25,000 for research on oyster predators this year from money collected as tariff on fisheries imports. The first allocation of the new funds, as announced by Secretary of the Interior McKay, includes $25,000 for New England oysters. According to the Fish & Wildlife Service, this will all be spent at Milford. The funds will be used to employ three or four more scientists, and for additional laboratory equipment.

The research will be aimed at starfish, snails and a recently-discovered fungus. There also will be renewed research on the life history of starfish and snails. The object is to discover the stage or stages in the life history of these creatures when they are most vulnerable so that control measures can be applied at that stage.

Trash Fish Plant Sought

The Southern New England Fishermen's Assoc., long inactive, has been revived in another effort to bring a trash fish processing plant to Stonington. A committee of five dragger captains recently toured New England and New York seeking a firm willing to set up a processing plant at Stonington.

Scalloping Season Starts

The season for taking scallops in the Niantic River opened on October 2 and will end February 28, scallops being taken from sunrise to sunset. None may be taken from the River without a permit, which are issued by town clerks of Waterford and East Lyme, or by any other person designated by the Selectmen of the towns.

At Little Narragansett Bay in Stonington the scallop season is from September 15 to March 31, inclusive, and in Stonington Harbor the season is from October 1 to March 31. In the inland waters of Stonington and Groton the open season is from October 1 to March 31.

Rhode Island Plans Stricter Patrols of Narragansett Bay

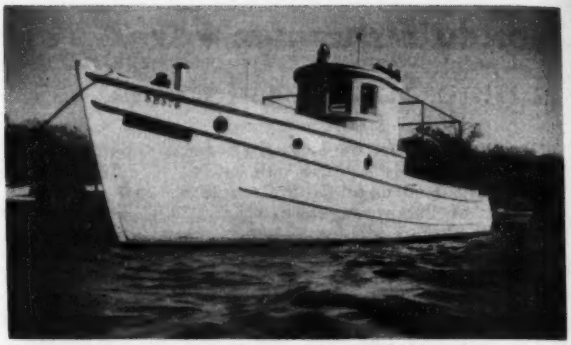
William R. Nolan of Warren, president of the Narragansett Bay Handrakers' Assoc., recently reported that the group had gone on record as being opposed to attacks on and defiance of State Conservation Officers by shellfishermen. He added that to the best of his knowledge, none of the Association's 160-odd members have been involved in attacks on wardens.

Governor Roberts also threw his support behind "get tough" handling of quahaug pirates, as Conservation Officers and State Police joined to map joint patrols of the troubled waters of Narragansett Bay and to investigate the ramming and sinking of a State patrol boat off Conimicut Point recently. The two officers on board the vessel had to swim 200 yards to shore.

Plans have been made for State troopers to accompany Conservation Officers on their night patrols, and Byron Blount, vice-president of the Blount Seafood Corp. of Warren, said the State should arm its patrol boats with machine guns if necessary. He agreed with John L. Rego, Director of Agriculture and Conservation, that court decisions and small fines are a serious weakness in the State's armor against shellfish law offenders.

Bristol Harbor Quahaug Ban Lifted

The ban on shellfishing in the western half of Bristol Harbor, in effect since Hurricane Carol's visit, was lifted on October 11. The lifting of the ban was based on the complete return to operation of Bristol's sewage collection and treatment facilities.



Herman H. Plante's 36' x 10½' x 4½' tub trawler and party boat "Roamer" which is based at Galilee, R. I. Her power plant is a 55 hp. General Motors Diesel

Massachusetts Research Vessel Explores for Shrimp

The most recent test cruise of the trawler *Delaware*, engaged in fisheries exploration off the New England coast, was discussed October 26 at a meeting between Francis W. Sargent, State Director of Marine Fisheries, and Joseph F. Puncochar, chief of the North Atlantic Technological Research Unit of the Fish & Wildlife Service. The trip of the *Delaware*, which is now operating out of the $3,000,000 fund created by the Saltonstall-Kennedy legislation, was devoted to exploring a possible source of shrimp in New England waters.

Sargent explained that the *Delaware* operated in the area bounded by 45 degrees, no minutes, north latitude, and 60 degrees, 45 minutes, west longitude, in depths ranging from 110 to 125 fathoms. He said 21 tows were made at speeds up to three knots using the new model trawls, fashioned by lining the old-style ones with a 1¾" mesh netting. Shrimp were taken on 13 of the 21 trawls and the average poundage on each tow was 35.

Sargent further commented: "The shrimp taken were of a brilliant red color and counted about 30 to the pound, and the tests also showed that better results were achieved during the daylight hours rather than at night."

He continued: "I am most optimistic about the possibility of locating a shrimp industry for the New Bedford fleet which is already set up for the deal without the necessity of spending very much money for boat conversion. Such an industry would certainly have a national market for its shrimp products."

Seed Shellfish Experiments

Gov. Herter recently discussed with Rep. Joseph A. Sylvia of Oak Bluffs, and Francis W. Sargent, Director of Marine Fisheries, the seed shellfish experiments currently under way on Martha's Vineyard. The Governor explained that experiments are being conducted in the Edgartown Oyster Pond.

From the survey now in progress it is hoped that valuable information will be found concerning the productivity of the numerous salt ponds characteristic of the southeastern Massachusetts coast. One of the objectives of the study is to obtain a complete record of hydrographic conditions over an extended period of time in a salt pond which is periodically closed to direct contact with the open sea; also, it is desired to learn just how many bushels of quahogs, clams and oysters can be harvested per acre per year from a body of water of this type.

Among this year's accomplishments have been a substantial set of soft-shell clams in the southern end of the Oyster Pond and a significant crop of young oysters which attached themselves to the shells which were planted in various sections of the Oyster Pond in late June. Growth of both clams and oysters has been satisfactory and the initial success of the project is encouraging.

Gloucester Freezer Expansion Under Consideration

A proposal that the State construct a new freezer of 7,500,000 lbs. capacity on the Fish Pier in Gloucester, to be paid for over a 20-year period by Gloucester Ice & Cold Storage, was made recently by James A. Ryan, treasurer of the firm, to the directors of the Gloucester Community Pier Assoc. In another expansion move Mr. Ryan asked for, and received, subject to State approval, permission to cut through a space and build a door to add a new freezer room capable of storing 250,000 lbs. more fish in the building at the pier.

Merchants Cold Storage & Warehouse Co. of Providence, R. I., has requested a lease of Fish Pier land to erect a cold storage of 8,000,000-lbs. capacity. Lack of freezing space for fish at Gloucester recently prompted Gorton-Pew Fisheries Co., Ltd., to request its boats to extend the usual time between sailings (three days after discharge of fish) to a full week.

New Dragger Goes Over Million Mark

The 72 ft. dragger *Mary Ann*, co-owned by J. Daniel Weitzman of Washington, D. C. and Capt. Sam Linquata of Gloucester, in its first three months production, has passed the million-pound mark and grossed some $20,000.

Wharves and Buildings Burned

A fire on October 26 which started in a building on Alexander Wharf, spread to the adjacent wharf of Kale P. Tysver and destroyed two small buildings. One building was occupied by the Cape Ann Lobster Co., operated by Martin J. Lally, and the other was used for storage of fishing gear and rented to Milton Wonson and Oscar Tysver.

"Julia DaCruz" Built on Lines of Shrimper

The 75' x 21' x 8' Florida-built dragger *Julia DaCruz* has joined the Gloucester, Mass. fishing fleet under command of her owner, Capt. Joseph N. DaCruz. Constructed by Shrimp Boat Builders Inc. of Jacksonville and designed by Fred Allen, the new vessel has a hold capacity of 34 tons. She will go groundfishing in the North Atlantic throughout the year except in the Winter when she will fish off the Virginia Capes.

The new vessel is built on the lines of a shrimp trawler, and has bunks for 2 in the fo'c's'le and accommodations for 3 in the deckhouse. Navigation operations on the craft can take place from a spacious wheelhouse way forward. According to Capt. DaCruz, this allows far better vision for the man at the wheel. The wheelhouse has a separate galley, the main galley being below deck.

The 187 hp. Lathrop DH-200 Diesel on the *Julia DaCruz*, sold by Marine Motors Sales Corp. of Jacksonville, gives her a speed of 12 mph. There is a 4:1 Capitol reduction gear, 3" Tobin Bronze shaft, Goodrich Cutless stern bearing and 50 x 36 four-blade Columbian propeller,

The new vessel is finished with Pittsburgh paint, and is equipped with 5 hp. Petter auxiliary engine, Onan generator, Maxim silencer, 32-volt Surrette HHG-31 batteries, Hathaway winch and hoist, Loran, White compass, Ray Jefferson radiotelephone, Raytheon depth finder, Cating rope, Real Host butane range and Rochester wire rope.

"Manuel P. Domingos" Gets Radar

The *Manuel P. Domingos* of Gloucester, a dragger owned by the United Fisheries Inc., has been equipped with a Raytheon "Mariners Pathfinder" radar Model 1500.

Capt. Wallace W. Bruce

Capt. Wallace W. Bruce, 75, formerly of Gloucester, died at the Snug Harbor home on Staten Island, October 14. Capt. Bruce was one of the top producers in the haddock and shack fisheries prior to World War I. His best known command was the *A. Piatt Andrew* built for him in 1912 by the John Chisholm firm.

The Florida-built dragger "Julia DaCruz", owned by Capt. Joseph N. DaCruz of Gloucester, Mass. The 75' craft was constructed by Shrimp Boat Builders Inc., Jacksonville, and is powered with a 187 hp. Lathrop DH-200 Diesel.

Maryland Oyster Industry Suffers Hurricane Damage

Maryland's oyster industry was hard hit by Hurricane Hazel, which wiped out numerous oyster beds, destroyed the seafood industry's plants and equipment and damaged the oyster fleet in the Cambridge area. In the Crisfield section, out of some 25 shucking houses, only one is reported still to be standing, and it was estimated that 500 oyster tonging boats were carried ashore by the storm in the Maryland part of the Bay.

David Wallace, director of the Oyster Institute of North America, said that tongers along the shores of Anne Arundel, Charles, Calvert and St. Mary's Counties could find no oysters to harvest. He believes the oysters were covered with sand and mud, or washed away.

Seafood packers said there might be hope for a good harvest if normal currents should uncover the oysters.

Late last month it appeared that oyster beds in Dorchester and other Eastern Shore waters did not suffer any great damage.

Somerset County Oystermen Doing Well

Somerset County's oyster tonging fleet was getting ready for full-scale operations the middle of last month. Tongers were bringing their catches to Crisfield from Fishing Bay, Pocomoke Sound, the Nanticoke and Potomac Rivers and other nearby oyster rocks.

Holland's Straits were opened to tongers on the 11th, with yields of as many as 50 bushels to a boat being reported. Packing houses were noticing an improvement in size and quality of shell-stock oysters offered.

Seafood Plant Expanding

Mrs. Paul's Kitchen, with headquarters in Philadelphia, has undertaken an extensive expansion program in Crisfield for the purpose of increasing the output and sale of its seafood products. The concern has bought the large brick oyster house building on the waterfront on the east side of Drewers Marine Railways, the Christy crab picking house, the mill house, and the building which houses its present processing plants.

Under the direction of Tony DiCrecchio, manager of the Crisfield plant, extensive repairs and renovations will be made. The crab picking plant is already in operation, and the oyster shucking plant will be opened soon.

Washington Meeting Discusses Alaska Salmon Regulations

The Fish and Wildlife Service held a three-day hearing in Seattle October 20, 21, and 22 to hear from all sides in the Alaska salmon industry on the subject of proposed fishing regulations for 1955.

Cannery operators, boat owners and fishermen generally asked for easing of restrictions in various Alaska areas. Southeastern Alaska spokesmen said they want assurance that fishing will be permitted to continue through the season. Alaska Peninsula spokesmen from both operators and fishing unions voiced opposition to a proposed 12-hour increase in the weekly closed fishing period in their area.

John L. Farley, director of the Fish & Wildlife Service and one of three top officials who conducted the recent hearings in Seattle regarding Alaska salmon fishing regulations for 1955.

John L. Farley, director of the Fish and Wildlife Service, was one of the three top officials who conducted the hearing. He commented: "The curtailment program already has shown satisfying results. As the salmon runs are restored in various areas we will amend the restrictions. Meanwhile, we are seeking all possible new information on which to help us base operations for the next two-year period. We hope to plan ahead two years at a time."

M. F. Stockwell of Seattle, speaking for the Southeastern Alaska Operators, representing 20 packing firms, said many salmon canneries will be unable to operate next season unless assured that fishing will be continued throughout the season. Stockwell stated that prospective pink salmon runs for next season appear less favorable than in the past year.

J. F. Krause, president of the Southeastern Alaska Seine Boat Owners Association, said his group wants "more flexible" closing dates in the various fishing areas. The Association also recommended creation of an advisory board to assist the Fish and Wildlife agency in deciding closing and opening of fishing in the different districts.

Speaking for Alaska Peninsula operations, Nick Bez, president of the P. E. Harris Co. and Peninsula Packers, said the proposed addition of 12 hours to the weekly closure in that area would seriously affect operations.

K. K. Kent, speaking for the Bristol Bay Operators, said his group proposed that fishing periods in the Nushagak district be extended from two days a week to 3½ days a week. Kent pointed out that the Fish and Wildlife Service forecast a smaller run for the Nushagak River in 1955 than that of 1954.

Seattle Landings for October

A drop of nearly half a million pounds in the Seattle otter trawl catch occurred during the month of October. The yield totalled 1,092,700 lbs., compared to 1,537,900 lbs. in the previous month. There were 36 trips landed in October.

Over 25% of the production for the entire month was brought in on the eleventh, when a fleet of 6 boats reported with 301,700 lbs. True cod landings again were in first position, with 250,800 lbs., compared to 697,700 lbs. in September. Runner-up was ling cod, landings of which totalled 171,750 lbs.

Only 560,800 lbs. of fish were landed by the halibut fleet during October, which was almost a million pounds less than in September. Sablefish predominated in the catch, with 467,400 lbs., followed by halibut, with 60,000 lbs., and rockfish, with 33,400 lbs.

Reef Nets are Ruled Legal

The Washington State Supreme Court has ruled by a 4 to 1 vote that reef nets are legal gear for commercial salmon fishermen in Puget Sound. The ruling was made in the case of an Anacortes, Wash. purse seiner who challenged the legality of the devices, charging that the nets are fixed gear and banned by State law.

Benefits of International Cooperation

Benefits of international cooperation in North Pacific fishing were described to a House Subcommitte on Merchant Marine and Fisheries in Seattle on October 4. Rep. Thor C. Tollefson, acting chairman of the committee, presided.

Representatives of three fishery commissions told how the United States, Canada and Japan have worked together to rebuild depleted stocks of halibut, salmon and other fish. The three groups are the International Pacific Halibut Commission, the Pacific Salmon Fisheries Commission and the International North Pacific Fisheries Commission. Spokesmen for the commissions told the lawmakers that more funds are needed to carry on the work.

Robert Schoettler, director of the Washington State Fisheries Dept., said the recent record run of Adams River sockeye salmon illustrates the success of the Pacific Salmon Fisheries Commission in restoring salmon to Washington State and British Columbia waters.

New Oyster Enemy

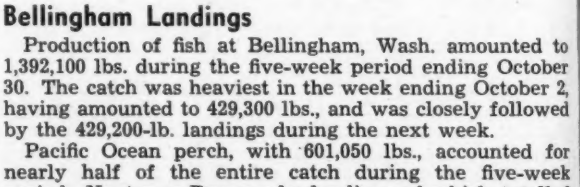
According to Charles E. Wohlke of the Washington Dept. of Fisheries, a new flatworm on the Pacific coast is killing large quantities of young native Olympia oysters. In southern Puget Sound the mortality of 1953 spat from this pest amounted to from 12 to 41 per cent in some areas. The worm actually makes a hole in the shells from secretions from its mouth opening. It then severs the oyster's muscle. Once the shells gape, the worm enters and devours the oyster.

This oyster enemy is very abundant. In one oyster dike the population was estimated at 600,000 worms per acre. While there are no known methods of control at present, life history studies and experiments aimed at finding a control method are now being conducted.

Bellingham Landings

Production of fish at Bellingham, Wash. amounted to 1,392,100 lbs. during the five-week period ending October 30. The catch was heaviest in the week ending October 2, having amounted to 429,300 lbs., and was closely followed by the 429,200-lb. landings during the next week.

Pacific Ocean perch, with 601,050 lbs., accounted for nearly half of the entire catch during the five-week period. Next was Dover sole, landings of which totalled 224,900 lbs. Other species in the catch included true cod, ling cod, rockfish, sablefish, English sole, petrale sole, rock sole and flounder.



The 65' dragger "Oregonian", owned by New England Fish Co. of Astoria, Ore., and skippered by Capt. Jack Ray. Powered with a D17000, 150 hp. V-8 Caterpillar Diesel with 3:1 Twin Disc reduction.

Views of Neah Bay, Washington, plant of Fishermen's Cooperative Association, Inc. which markets fish for salmon fishermen and dragger operators, showing unloading dock at left and ice chutes at right. A supply store, in charge of Mrs. Katie Leal, carries an extensive line of fishing supplies, and the organization handles Mobil petroleum products. The plant makes 45 tons of ice per day and has ice storage facilities for 200 tons. Headquarters of the Cooperative is in Seattle and Bert G. Johnston is manager. The Cooperative has another branch at Westport, Wash. which has an ice making capacity of 20 tons per day.

Oregon Fishermen Oppose Closing Coastal Streams

Columbia River commercial fishing interests have joined other Oregon fishermen and packers in an effort to defeat a State initiative petition proposing to close coastal streams south of the Columbia River to commercial fishing for salmon and trout.

The measure would prevent taking of the species by methods other than rod and reel, and would extend the closure areas to three miles at sea from the mouths of all coastal streams, except the Columbia, which forms the north border of the State.

The closures would prevent trollers from delivering catches in any ports south of the Columbia and violations, the proposal sets forth, would make commercial fishermen's gear subject to confiscation and sale.

The Oregon State Fish Commission has taken a stand against the initiative measure which was to be voted on at the election on November 2. The Fish Commission asserts that the proposed closures would negate its efforts to rehabilitate the salmon runs in coastal streams.

Has Successful Albacore Season

Veikko Romppanen's 60-ft. dragger *Valhalla II* returned to Astoria in late October after a successful albacore tuna season in southern California. During the Summer the vessel delivered 57 tons of tuna to California ports, to record one of the high catches in that fishery.

The *Valhalla II*, for several seasons high boat in the Astoria fleet in trolling and bottomfishing, was one of the last of local boats to return from the tuna grounds. Eight other draggers and perhaps a dozen Astoria trollers went south for the California season.

New Method of Raising Oysters

W. P. Breese of Oregon State College's marine research laboratory at Yaquina Bay is attempting to raise oyster larvae in 12-gallon crocks. Conditions in the bay are just right for natural seeding only about one year in four, and if the oyster can be grown satisfactorily in crocks and transplanted, Oregon commercial oyster populations in many bays could be boosted.

Forecast Willamette Chinook Salmon Run

The Oregon Fish Commission believes that a fall run of chinook salmon in the Willamette River may become an actuality in the not-too-distant future. Such a run was present in that river system prior to the early 30's.

Eight adult and twelve jack fall chinook have been counted over the fishway recently, and Fish Commission biologists think that these fish are returning from a big 834,000 planting of fall chinook fingerlings in the North Santiam River in 1950.

Troll Fleet Tying up for Winter

The Winter's first small craft warnings drove the troll fleet into port early in October, and most trollers were tying up their boats or drydocking them rather than waiting for legal closure of the season November 1.

Storms held the drag fleet inside during the early weeks of October, but some trawlers sailed for limited catches of bottomfish during the latter part of the month.

A small fraction of the river gillnet fleet fished the Columbia during the September and early October season, but poor catches of salmon were recorded.

Siletz River Fish Tagging Program

The Oregon Fish Commission is currently conducting a Siletz River fish tagging program designed to find out how many adult salmon will enter the River this Fall.

The Commission also seeks information on how many Siletz River salmon are taken by sport and commercial fishermen, and how many fish escape to the spawning grounds.

New Wiley Creek Fishway

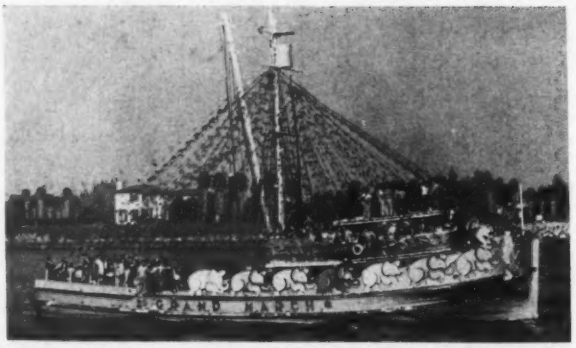
A new $35,000 fishway, designed to elevate spawning steelhead and spring chinook salmon over a millpond dam on Wiley Creek, a South Santiam River tributary, was expected to be completed last month.

The Fish Commission also announced that it plans to construct a fishway over a natural falls on Wiley Creek 1½ miles above the M. & M. dam. The two projects when completed, will provide easier fish access to 15 miles of good spawning area. Proposed plantings of steelhead and salmon fingerlings in Wiley Creek next Spring should also help to rehabilitate the stream.

Catching Fin-Marked Salmon

Harry L. Rietze, biologist in charge of Columbia River investigations, recently reported that quite a few fin-marked Sandy River silver salmon have been observed in Columbia River commercial catches. Rietze stated that the marked fish are the result of a 1953 planting of 101,000 silvers in the Sandy. At the time of release, the 14-month-old fingerlings were marked by the removal of the adipose and anal fins.

Sport fishermen have reported Sandy River catches of jack silvers with the adipose and left ventral fins missing. The marked jacks are returning from a January 1954 planting of 151,000 fingerlings. Both plantings of marked fish are part of an experiment to determine what happens to hatchery-reared fish after liberation.



The golden-hulled purse seiner "Western Explorer", sweepstakes winner in the best decorated boat contest at the San Pedro, Calif. Fishermen's Fiesta. Capt. Frank Manaka brought her in the day before the Fiesta, and she paraded with fish in her holds. About 50 San Pedro area commercial fishing boats, decorated in the theme "Circus Time", participated in the contest.

California Tuna Fishermen Oppose 200-Mile Claims

San Diego's tuna fishing fleet recently served notice that it would not recognize the manifesto by Ecuador, Chile and Peru which would lock the large tuna boats out of valuable fishing grounds unless they pay fees to the three countries.

Harold F. Cary of the American Tunaboat Association said the more than 100 border-city tuna clippers will only observe the three-mile limit which is honored by United States law.

State Department officials are concerned over the tripartite South American agreement, which would build a barrier against Southern California tuna fishing boats 200 miles at sea. They have sent formal protests to the governments of Ecuador, Peru and Chile.

Presently the only weapon the United States can use against the declarations is the Fishermen's High Seas Protective Act passed by the 83rd Congress. Under this Act, boat owners whose vessels are seized in waters recognized by the United States as high seas, may be reimbursed by the Government for fines and certain other costs in connection with confiscation by foreign governments.

Tuna Clipper Launched

Thousands of San Diegans witnessed the first Sunday launching of a high seas tuna clipper in local shipbuilding history on November 14, when the all-steel *Dominator* slid down the ways of the National Steel & Shipbuilding Corp. for Capt. George Soares.

The 340-ton, 127 ft. clipper is a sistership of the *Cabrillo*, owned by Capt. Joe Soares. The *Cabrillo* was scheduled to leave the harbor late last month on her maiden voyage to the Latin-American fishing banks. Each of the vessels is powered with a Model DMG-38 turbocharged Enterprise Diesel, rated 950 bhp. at 450 rpm.

Construction of four more all-steel tuna clippers has been started at the National Steel & Shipbuilding yard. Sisterships of the *Dominator* and *Cabrillo* are to be built for the California Tuna Fleet, Inc. This firm, just organized and composed of Eastern businessmen who are investing in the local tuna industry, has taken over financial control of National Marine Terminals. Marine Terminals operates the fishing fleet of Westgate-California Tuna Packing Co.

San Pedro Fishermen's Fiesta

More than 100,000 persons lined the wharves and the streets of San Pedro last month to watch 50 commercial fishing boats decorated in the theme "Circus Time", filing down the channel to bring a close to the two-day Fishermen's Fiesta.

Sweepstakes prize went to Capt. Frank Manaka's purse seiner *Western Explorer* which also won top honors for vessels 61 ft. and longer in length. Other winners in this class were Sam Randazzo's *Endeavor* and Capt. Lawrence Zuanich's *Stranger*.

Among boats under 60 ft. John Mardesich's *Nyna Rose* took first place. The *Santa Teresa* won second place for owner John Sima, while John Vicocich's *Sea Hawk* took third place.

Tuna Research Foundation's entry, the seiner *Courageous*, won first place among sponsored and non-commercial entries. Second place was taken by John Zankich's *Western Monarch*, sponsored by Fishermen's Cooperative Assoc., and the Fishermen's Union entry, the seiner *Liberator*, was third place winner.

In the fourth division, the boat *Jo-Ann* took first prize, followed by the *Nancy Rose*, sponsored by Van Camp Sea Food Co., and the *Columbia*.

Good Crab Season Anticipated

The crab season, slated to open in Eureka December 15, will provide the next major fishing activity in the area. While it is yet too early to predict the outlook for the season, local companies anticipate favorable runs.

The final weeks in October found a number of commercial fishermen preparing to leave for San Francisco for the opening of the crab season there on November 15.

Salmon Landings in Humboldt Bay

Commercial salmon fishing in Humboldt Bay waters ended September 30, with landings for the season listed at 1,172,300 lbs., a figure less than half the total recorded for last year. Albacore deliveries, virtually at a standstill during October, by the end of the month had dropped to 20,900 lbs., as compared to the 1953 total of 264,500 lbs.

Lack of significant landings during the final weeks of the salmon season was attributed mainly to rough weather off the coast, which prevented boats from engaging in much activity.

Tuna Clipper Believed Total Loss

The tuna clipper *North American*, which went aground at the base of Point Loma during a thick fog October 27, was believed to be a total loss last month. Two attempts by tugs to pull the craft back into deep water failed, when the tugs snapped two large steel towing lines.

Sverre Jangaard, owner, saved 90 of the 95 tons of tuna aboard.

Good Bottom Fishing

Eureka fishermen last month were occupied in catching bottom fish, which were being delivered in good-sized quantities to local companies in spite of the fact that rough weather kept many of the fishing boats tied up at dock. Landings of bottom fish were about on a par with last year's catches.

From July through late October landings amounted to 3,316,600 lbs., and during October, exclusive of the final week, landings amounted to 600,000 lbs., whereas the total was 758,100 lbs. for the entire month last year. During the four-month period Dover sole held the lead at 1,404,100 lbs. in bottom fish deliveries, followed by rockfish at 401,100 lbs., and petrale, 112,100 lbs.

After the close of the salmon season in the area, a number of Eureka boats switched to a different type of gear to fish for black cod and other bottom fish.

Mackerel Catch Declines

The smallest catch of Pacific mackerel in 26 years, amounting to 7,600,000 lbs., was recorded during the 1953-54 season. The decline in mackerel catches was similar to that of sardines.

Tuna Landings Show Gain

During the first nine months of 1954 the San Diego fishing fleet delivered to the canneries 56,300 tons of tuna, or 10,000 tons more than for the corresponding period last year.

However, in September San Diego's fishing fleet caught

11,403,000 lbs. of seafood, or approximately a million lbs. less than in September, 1953. The biggest increase in the catch was in yellowfin, a gain of about two million lbs.

Fish Canners Association Elects Loker

Donald P. Loker became president of California Fish Canners Association at the organization's October meeting held at Ojai. Loker is vice-president of Star-Kist Foods, Inc.

The Association and Tuna Research Foundation, a tuna trade promotional agency, are merging as a result of a vote of approval at the session. Details of the merger are being worked out by Roy Beaton, California Fish Canners Assoc. general manager. The Foundation's office will be moved to the Association's office at Terminal Island. The Association will undertake a trade survey aimed at stimulating tuna sales throughout the nation.

San Francisco Fishing Fleet Blessed

San Francisco's fishing fleet received its 18th annual blessing on October 3, as more than 1000 persons watched the traditional ceremonies at Fishermen's Wharf, following a parade.

Salmon Marketing Association Active

In its first year of operation as an incorporated business concern, the Salmon Trollers Marketing Assoc. at Noyo has completed transactions for the salmon season and launched into its Winter phase of work. The five companies in Noyo have signed to accept fish deliveries this Winter, marking the first time in several years that all the companies will be active in the purchasing of fish during the Winter months.

Members of the group plan to fish for bottom fish and are making up new gear and repairing their old.

Vessels on the Ways

Boats on the ways during October at Graham's Boat Basin and Marine Ways at Fields Landing included the *Rainbow*, a dragboat owned and skippered by Richard Young of Eureka, in for minor repairs and a complete paint job; the *Signet*, a 40-ft. salmon boat from Crescent City, in for a paint job; and the *Ina*, a 56-ft. dragboat from Eureka, which received a paint job and propeller change.

Gillette's Marine Ways at Fairhaven took in the *Joseph Alioto*, a dragboat owned by the Consolidated Fish Co., for complete paint job and general overhaul; and the *General Pershing*, owned by Leonard Harrison of Eureka, a shrimp boat which operates for the Tom Lazio Fish Co.

Sardine Association to Support Bag Limits

The San Francisco Sardine Association held its annual meeting on September 25, and elected John Costanza as president and George J. Christo as secretary-treasurer. The membership adopted the following resolution:

1. To propose and support in the forthcoming legislature in January the measures that would tend to conserve the sardine, anchovy and mackerel fisheries.
2. Support legislation establishing bag limits on a district allocation basis.
3. That when bag limits and quotas are established they should be on an equitable allocation to both segments of the industry—cannery and reduction.
4. These quotas to be subject to changes up or down according to information and light which will be shed by the research groups now engaged under the jurisdiction of the Marine Research Committee.

The Association named John Costanza, George J. Christo, Julian G. Burnette, Alex Imlach and Frank Mezin as directors.

Capt. William Hill on his 34' troller "Esther J." at Eureka, Calif.

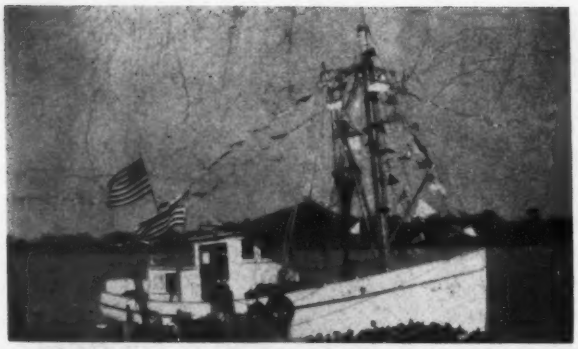
The troller "Banshee" owned by Leon Davis of Crescent City, Calif., and powered with a 4-cylinder General Motors Diesel.

Experimental Electric Fishing Being Done in Scotland

The Scottish Herring Industry Board is to carry out experimental work this season on electric field fishing. Tank tests first were undertaken at the Marine Laboratory of the Scottish Home Department to study effect of pulses on fish and to determine suitable duration and spacing of pulses. From this initial work the Board proceeded to the construction of equipment for suitable switching and timing on a pilot commercial scale.

The *Silver Scout* was equipped with power supply equipment driven from the main engines, and made initial tests at sea. Here again, the immediate result was to determine further difficulties including design and production of electronic control equipment and the manufacture of electrodes suitable for immersion in the sea.

The difficulty of triggering the ignition appears to have been overcome as a result of this work; the problem of securing satisfactory extinction of the ignition at operational voltages has not yet been solved, the Board reports. It is thought that power losses in the discharge circuit may be reducible, but it does not seem that they can be eliminated easily. These results have encouraged the preparation of further equipment which will be tested at laboratory stage and at sea.



The 41½' shrimper "New Jersey", owned by Joseph Boudlauche of Lafitte, La. A 110 hp. General Motors Diesel furnishes power for the vessel, and there is a 2:1 Twin Disc reduction gear and 30 x 17 Michigan propeller. Other equipment includes Union wire rope, Linen Thread nets, Stroudsburg hoist, Northill anchor and Hudson American radiotelephone. Esso fuel and lubricating oil are used.

Virginia Bans Exporting of Seed Oysters from State

The Virginia Commission of Fisheries recently issued an order forbidding the exporting of seed oysters from the State. The order followed a hearing in which oystermen from the Rappahannock and other areas protested the policy of allowing seed oysters to be sent out of the State.

The law permits the Commissioner of Fisheries to grant permits for out-of-state shipment of seed oysters after he has ascertained that such shipments will not injure or deplete seed areas in the State.

Representatives from the Eastern Shore asked the Commission to support legislation that would put a 25-cents a bushel tax on seed oysters being shipped out of the State, instead of the present tax of two cents.

New Minimum Depth for Patent Tongs

A minimum depth of 21 ft. for oystermen using patent tongs in the Rappahannock River was fixed recently by the Virginia Commission of Fisheries. The Commission had proposed a minimum depth of 24 ft., but after hearing arguments by tongers for a minimum of 18 to 20 ft., a compromise decision was reached.

Tangier Island Industry Hit by Hurricane

Hurricane Hazel did about $25,000 damage to Tangier Island, with the greatest damage to the fishing industry itself. Twenty boats ran upon high land, crab pounds and their floats went down with the winds and the waves, and hundreds of crab pots broke loose from their moorings and were swept out to deep waters.

Despite the losses, however, some of the crabbers were ready to fish their pots a few days later. These were the reserved pots that most potters keep in readiness against all storms.

Great swarms of crabs seemed to follow in the wake of the storm. Just two days after the hurricane, the crabbers were catching from 1200 to 1500 lbs. a day to the boat and selling them at five cents a pound.

Hampton Roads Area Landings

A drop of approximately 300,000 lbs. was shown by fish production in the Hampton Roads area during the month of October. The catch amounted to 996,200 lbs., which included 396,600 lbs. from pound nets.

Almost half of the landings consisted of scup, the yield of this variety having amounted to 488,100 lbs. Spot production ranked second, with 206,700 lbs., compared to 500,-700 lbs. the previous month.

Louisiana Organization Wants To Outlaw Two-Inch Mesh

An effort to have two-inch mesh outlawed for commercial fishermen was made last month at a meeting of the Commercial Fishermen of Louisiana, a Statewide organization, and members of the Cross Lake committee of the Caddo Wild Life Federation.

Under present State law, the use of two-inch mesh is allowed on Cross Lake as well as other State-controlled inland waters. Members of the fishermen's group are seeking to gain State sanction for mesh no smaller than 3½ or 4 inches.

The two-inch mesh traps many of the game fish which the members of the organization do not wish to catch.

Oyster Association Elects Officers

Glenn Martina is the new president of the Louisiana Oyster Dealers & Growers Assoc. He succeeds Joseph M. Jurisich. Also elected at a meeting of the organization recently were B. V. Pausina, vice-president; Leopold Taliancich, secretary and Louis Battistella, treasurer.

Lands Unusual Shrimp

Capt. Bill Haase, owner of the trawler *Oose*, last month landed an odd, large shrimp. The creature was rusty brown in color and measured 12¼ inches long. Mr. Haase believes that it was a fresh-water shrimp.

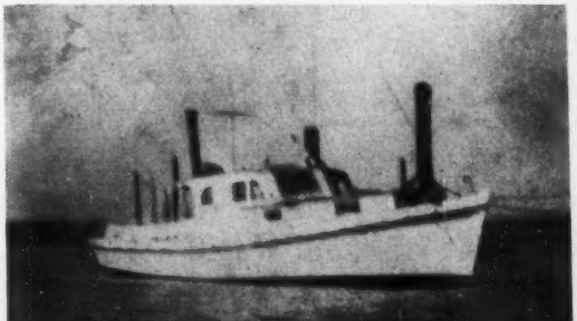
Buquet Oyster Plant Busy During Season

The Buquet oyster cannery in Houma operates but four months of the year, but those four months are the scene of violent activity along the canal front where the plant is located. Working an 18-hour day, the plant processes 15,000 cases of oysters during the season.

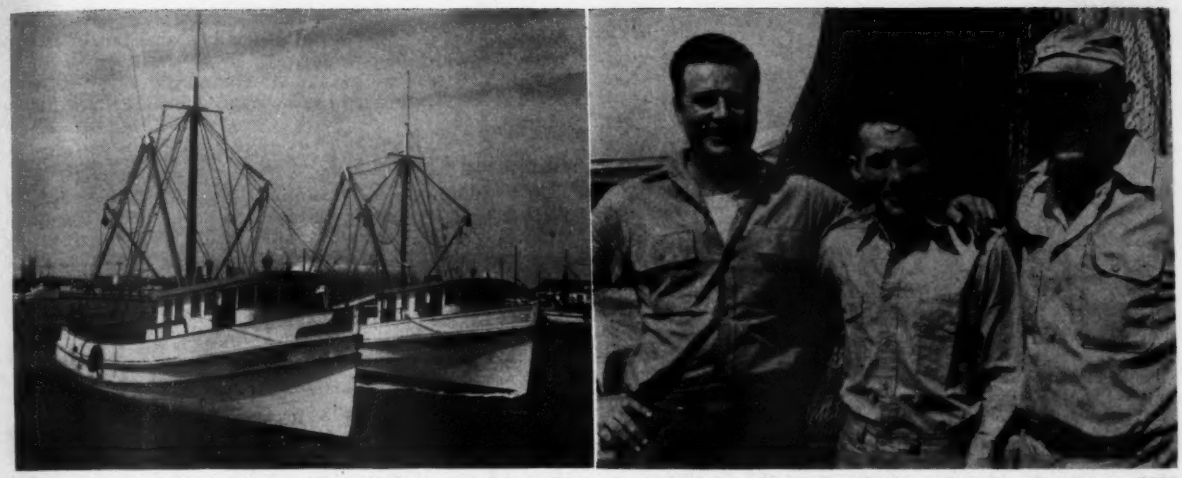
About 12 boats serve the plant, which has an electric-powered conveyor to carry the shells from the boat to the cleaning chute. The revolving cleaning apparatus gets the shells spotlessly clean. From there they are conveyed to steam kettles which steam the oysters partially open.

Then the oysters are conveyed to the opening tables where workers rapidly open the shell and remove the meat of the oyster. When a bucket of oysters is filled by an opener, he checks it into the office where the oysters are packed in large closed containers. Still in these containers, the denuded crustaceans are transferred to the canning department where they are washed in clean water by a combination of machinery and hand processes.

When clean, the oysters are packed rapidly into the tins along with a "pill" of salt and are placed on a conveyor which carries them to the sealer. An attendant stands at the sealer and as the cans come off the machine she places them in a special container. The large container is in turn placed in a giant "pressure cooker". Following the cooking process, the cans are set to cool in a vat of water.



The 42½' gill-netter "Paul & Francis II", owned and operated by Roland Booth, Jr., Chincoteague, Va. Her engine is a 115 hp. Chrysler which swings 18 x 18 Columbian propeller. Other equipment includes Augur nets and Danforth anchor, and Esso fuel and lubricating oil and Columbian rope are used.



The Aransas Pass, Texas shrimpers "Texas Pride", powered by a Caterpillar D13000 Diesel, and the "Southern Clipper", which has a D337 Caterpillar. The men shown at right include Capt. Raymond Guidry of the "Southern Clipper"; Capt. Willard Granger of the "Texas Pride" and Vernon Crotts, owner of the boats.

Texas Meeting Favors Bay Shrimping Restrictions

Commercial fishermen, sport fishermen, representatives of clubs and sportsmen's groups held a meeting in Galveston last month to help improve the bay shrimp business. A resolution was passed favoring the closing of inland bays and bayous to commercial and "semi-commercial" shrimping except for one 60-day season each year. "Outside" activities of the shrimpers would not be affected.

About 50 sportsmen and bait dealers outvoted five representatives of the commercial fishing industry to pass the resolution. Although the plan was referred to as an aid to the commercial fisherman (because its limitations would cut down on the now-popular practice of part-time shrimping and lowering of market prices), commercial fishermen were the outspoken opponents.

The proposal would not apply to bait dealers shrimping with their smaller rigs with 10-ft. trawls, but would place a limit of 5000 live shrimp per bait boat and a limit of 150 live shrimp and five lbs. of dead bait on the sport fisherman.

The resolution would apply to all inland lakes and bays and tidal waters, and natural and man-made passes, including one mile thereof.

Fishery Landings Increase

Total landings of marine products at Texas coast ports for the fiscal year ending September 1, were 138,231,400 lbs., a 10 per cent increase over last year's catch of 125,533,700 lbs. Shrimp production was up 10 per cent for the year totaling 67,758,000 lbs., against 60,713,600 lbs.

Edible finfish was off 10 per cent, with flounder and black drum production off 50 per cent and 35 per cent respectively. Menhaden production reached 67,240,200 lbs., an increase of 10 per cent over the 61,397,400 lbs. the previous year.

Oyster and crab production made the largest gain. Oysters were up from 292,850 lbs. of strained meats last year to 515,000 lbs. for the 1953-54 period, while blue crabs increased from 28,750 lbs. in 1952-53 period to 51,000 lbs. during 1953-54.

Shrimp Production on Increase

Despite tropical disturbances and hurricane warnings in the south Gulf, shrimp production was on an increased scale along the Texas coast last month. Bay shrimping has improved noticeably, and good runs of marketable white shrimp have been brought in.

Large Gulf trawlers fleeing to avoid tropical disturbances were forced to anchor at any available location. Some crews immediately began operations in the northwest Gulf, landing their catches far from home ports. Many south Texas trawlers and some from as far way as Florida unloaded their shrimp at Aransas Pass, which helped this port lead the coast in shrimp landings for a total of 17,200 barrels of mixed white and brown-grooved shrimp during the 30-day period ending October 25.

Landings at Brownsville were 16,900 barrels; at Port Isabel, 10,000; Galveston 8,600 barrels and Matagorda area reported 2,600 barrels.

Fish production during this 30-day period was the heaviest of the year. Red snapper landings at Galveston, Aransas Pass and Port Isabel exceeded 125,000 lbs. Bay fish catches were large with a wide assortment of species. For the first time this year golden croakers made the commercial market, and a small amount of flounders were reported from Aransas Pass. Black and red drum were plentiful. Speckled sea trout catches were large.

Catch Pink Shrimp in Daylight

Pink shrimp caught in trawls in Texas waters near the coast along the central shoreline during the daylight hours have been marketed for the first time, according to local shrimpers.

The first were reported by J. F. Hamm of the trawler *Howdy Shaw*. Several trawlers took an average of nearly 1,000 pounds of pink shrimp outside Corpus Christi Channel, near the bar, during daylight hours. The shrimp disappeared when darkness came. Pink shrimp are seldom taken along the central Gulf coast, and then only at night and well offshore.

Building Own Trawler

The New Brothers are building their shrimp trawler, *Salty Dog*, in the backyard of their home at Ingleside. She will be powered by a Caterpillar Model 337 Diesel, rated 170 hp. continuous, and driving a 42 x 32 propeller through 3:1 Snow-Nabstedt reduction gear. Equipment is being furnished by Wm. K. Holt Machinery Co. of Corpus Christi, Texas.

Alabama Landings Show Increase

Landings of fishery products at Alabama ports during August totaled 1,804,000 lbs. This represented an increase of 330,000 lbs. or 22 percent compared with the yield during the previous month. Shrimp was the leading item produced, with the catch totaling approximately 1,364,000 lbs. and comprising 76 percent of the month's total landings.

Bernard Bartlett of Corea, Me., who uses a 10 hp. Johnson outboard to tend his gang of 120 lobster traps.

Maine Lobstermen's Group Completes Organization

Approximately 100 lobstermen convened October 22 at Rockland as delegates of the Maine Lobstermen's Association, and approved the incorporation of the Association, with maintenance of headquarters at Rockland. The delegates represent the coastal communities' lobstermen and constitute the executive board of the Association. One delegate represents each 25 members in his particular area.

Tentative by-laws were approved, to be submitted to the membership for final approval. Leslie Dyer of Vinalhaven, the president, and A. Alan Grossman, legal counsel, were chosen as legislative agents for the Association.

Membership in the newly-organized Association is now in excess of 350 lobstermen. Some 50 lobstermen joined the group at a meeting on Orr's Island October 13.

The purposes of the Association are as follows:

1. To form an association of independent lobstermen of the Maine coast for their mutual benefit and assistance.
2. To promote a program to bring about a more friendly spirit of cooperation among all lobster fishermen.
3. To conduct investigations, make experiments and do any and all things tending to increase knowledge, further the interest and improve the condition of the members of the association.
4. To encourage, by proper and lawful means, sound and economical trade practices within the industry and to strive for the elimination of such practices as are unfair, uneconomic and contrary to sound business principles.
5. To encourage the enactment of wise and uniform State and Federal legislation relating to seacoast fishing industry and to oppose the enactment of unwise legislation.
6. To provide a forum for the interchange of information, ideas, and viewpoints.
7. To promote and protect the welfare of the association on a State and National basis and to affiliate the association with such National fishermen's associations as will help with State problems.
8. To acquire, lease, take and hold by purchase, gift, devise, bequest or otherwise, personal and real estate not exceeding the amount limited by law.

Trawler "Surf" Pulled off Ledges

The trawler *Surf*, 132' steel craft operated out of Rockland by Birds Eye, came into port under her own power October 19, after her crew had pulled her off the ledges of Devil's Limb on Seal Island, N. S.

Capt. Douglas Schwartz and his 10-man crew saved the ship with the aid of Seal Island lobstermen. The trawler's winches were used to strain on cables to the anchors which had been taken offshore by the lobstermen, so that the *Surf* could utilize her own power to pull herself toward deep water.

The *Surf* was hauled on the company marine railway, but the full extent of the damage was not immediately known.

Rockland Landings

Fish landings in Rockland for September totaled 6,810,300 lbs. of redfish, herring and groundfish. The Birds Eye fillet plant received a total of 5,128,700 lbs. from its nine trawlers. Highline trawler for the month was the *Ocean*, Capt. Fred Ryan, which landed 720,500 lbs. in three trips.

The sardine pack for September was somewhat larger than usual, and the pack is considered to be one of the best in recent years.

Publicity for Sardines

Canned Maine sardines received nation-wide publicity in *Food Outlook* for September, the monthly newsletter of the National Restaurant Assoc. An article entitled "Ever Have a Sardine-Burger?" appeared on the back cover of the bulletin. It announced the availability to restaurant operators of the 24-recipe card packet that is being distributed by the Maine Sardine Industry, Augusta.

Harris Distributing Lister Diesels

The Harris Company, Inc. of Portland, has been made distributor for Lister Diesel engines in the State of Maine. The appointment was announced by the Engine Division of The National Supply Co., distributors of Lister engines in the United States. Manufactured by R. A. Lister & Co. of England, the engines are equipped here with American accessories.

"Clauneker" Gets Radar

A Raytheon "Mariners Pathfinder" radar Model 1500 recently has been purchased by the Holmes Packing Co. of Eastport, for installation on the *Clauneker*, a vessel owned by Harding Guptil and named after his three sons, Claude, Neil and Kerry. The vessel serves as a sardine carrier, and as a lobster smack in the off season.

An interesting feature of the new radar, is the fact that it is equipped for "reflection plotting", a new science that will make it possible for Capt. Guptil to plot the course and speed of vessels in danger range, right over the changing picture on the radar scope. The equipment was obtained through the Hicks Machine Co. of Eastport.

Shipyard Holds Open House

The East Boothbay shipyard of Hodgdon Brothers-Goudy & Stevens held a housewarming on October 30 to celebrate the rebuilding of the Hodgdon plant, destroyed by fire last January. Most impressive of the new construction is the 80-ft. square building housing the mill and construction shop and the yard offices.

Workmen have started laying the foundation for an 84 ft. by 28 ft. machine shop in the Goudy & Stevens yard. Recently completed in the same area is a 60 ft. by 40 ft. fabrication and sheet metal shop.

Proves that Fish Make Sounds

The new conception that the undersea world is noisy rather than silent has received added support from an investigation made at the University of Rhode Island's Narragansett Marine Laboratory. Of the 60 North Atlantic coastal fishes studied by Mrs. Marie P. Fish, research biological oceanographer, only six produced no sounds at all.

Fish make sounds voluntarily and with a purpose, the study indicated. Sound may be used as a means of communication, an expression of fright, for defensive or offensive purposes, and as a response to changes in the surroundings.

Only the longest, strongest fibres go into Adams' twine

Distributors:

Seattle Marine & Fishing Supply Co.
Seattle, Washington

Englund Marine Supply Co.
Astoria, Oregon, also located in Newport, Oregon

A. D'Acquisto & Sons
Monterey, California

Seaside Supply Stores, Inc.
San Pedro, California

Coast Equipment Co.
San Diego, California

Marine Supply Co., Inc.
Aransas Pass, Texas

La Nasa Hardware Co.
New Orleans, Louisiana

Fernandina Lumber & Supply Co.
Ft. Myers Beach and Fernandina Beach, Fla.

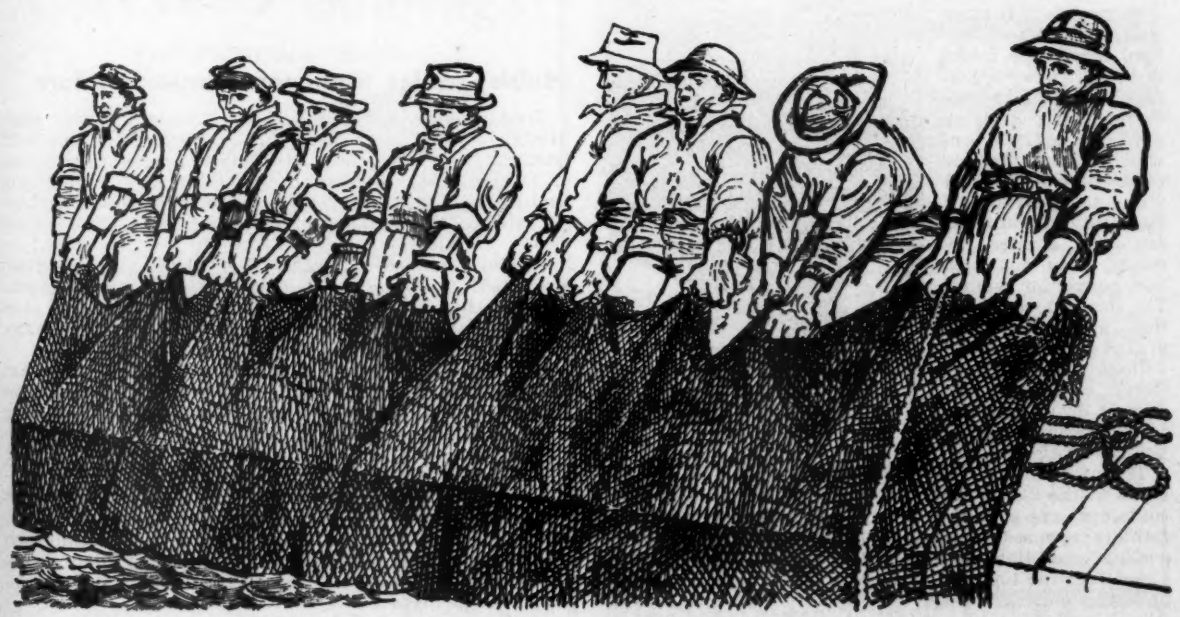
Take two pieces of netting. Both may look exactly alike. But when each is tested by a huge fish load, one might rip or fray without warning.

When you use Adams' netting, this risk is reduced almost to zero. Before even one fibre is spun into twine, only the longest, strongest strands are selected. And all waste is removed. Then when the twine is woven into netting, every mesh is checked for 100% uniformity of size and shape.

What does this mean to you? It means that you get full strength from every fibre, from every mesh. It means that your Adams' net lasts longer, gives you more profit per dollar. So make your next netting order, Adams' Best.

ADAMS Nets · Twine ADAMS' BEST

Adams Net and Twine Division
THE LINEN THREAD COMPANY, Inc.
701 North 2nd Street, St. Louis, Missouri



EQUIPMENT and SUPPLY NEWS

Red Wing Line Includes Four New Engines

Red Wing Marine, Red Wing, Minn., announces the addition of four new lightweight, high-speed gasoline engines to its "golden anniversary" line. The company, which is this year celebrating 50 years in the marine business, will show the engines for the first time nationally during January at the National Motor Boat Show in New York.

William King, general manager of Red Wing, states that the new engines, to be known as the Meteor Series, will be equipped with the most modern features. The new Red Wing motors include the 20 hp. Meteor "20", the 60 hp. Meteor "60", the 110 hp. Meteor "110", and the 150 hp. Meteor "150".

The Meteor "150" is designed for larger boats, and can be used in single or twin screw installations. Red Wing's Meteor "110", which is a high-speed 6-cylinder engine, is also available in twin screw pairs for larger craft. All the engines in the Meteor series are designed for easy installation of vee-drive and for economical operation.

New Marin Electric Bilge Pump

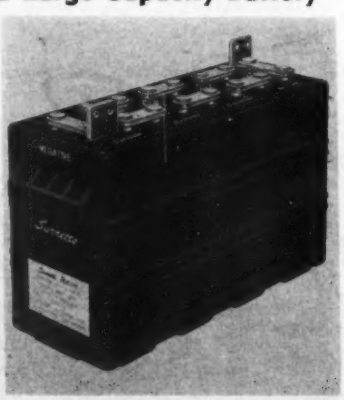
A new low-priced electric bilge pump, of solid bronze construction throughout except for the motor, now may be obtained from The Marin Co., 2414 East 57th St., Los Angeles 58, Calif. The pump is available for 6 or 12-volt electric systems. It will lift in excess of 15' and will pump approximately 540 gallons per hour.

The impeller, impeller housing and motor support bracket of the Marin bilge pump are heavy duty bronze castings designed for a lifetime of service. The pump shaft is of naval bronze and is 6⅛" in length. Distance from the bottom of the electric motor to the bottom of the intake port is 8⅜". Longer pump shafts (in increments of 6") will be furnished at slightly higher cost.

The intake port of the Marin bilge pump is screened with durable bronze mesh, while the outlet port is equipped with brass nipple to receive a hose discharge line if desired. Mounting bracket is included.

New Surrette Extra-Large Capacity Battery

Surrette Storage Battery Co., Inc., Salem, Mass., has introduced a new extra-large capacity marine battery with Rezistox grid construction, which makes possible more plates per cell with no sacrifice of durability. Advantages are 20% greater capacity, size for size and pound for pound. The Rezistox construction also results in maintaining higher voltage in cranking, faster cranking, less current draw, and less current concentration per positive plate.



New Surrette extra-large capacity marine battery.

The new batteries have capacities of up to 496 ampere hours at the 8-hour rate. Their molded rubber Monobloc containers are provided with bottom skid insulators and reinforcing side bands which allow ventilation and better cooling. Additional height (2½") of electrolyte is provided over the tops of the plates to reduce the frequency of adding water.

New officials of the Enterprise Engine and Machinery Division of General Metals Corp. Left, Arthur W. Ostrander, general sales manager of the Division, and right, Wm. Clausen, general manager of the Division and executive vice-president of General Metals Corp.

Personnel Changes at Enterprise Engine

The Enterprise Engine and Machinery Division of General Metals Corp., San Francisco, has announced two new personnel appointments recently. Wm. Clausen has been named general manager of the Division and executive vice-president of General Metals Corp., while Arthur W. Ostrander has been appointed general sales manager of the Division.

Mr. Clausen was vice-president and general manager of Sangamo Electric Co., Ltd. of Canada. Prior to his connection with this heavy electrical equipment manufacturer, he held top management positions with other leading manufacturing companies.

Mr. Ostrander's appointment is an important part of the company's major expansion program which includes the introduction of new engine models in power capacities in excess of 5,000 hp., as well as a major increase in field sales and service personnel. Ostrander was formerly executive vice-president of American Farm Machinery Co. of Minneapolis, Minn.

Hubley, Sales Manager Johnson Motors

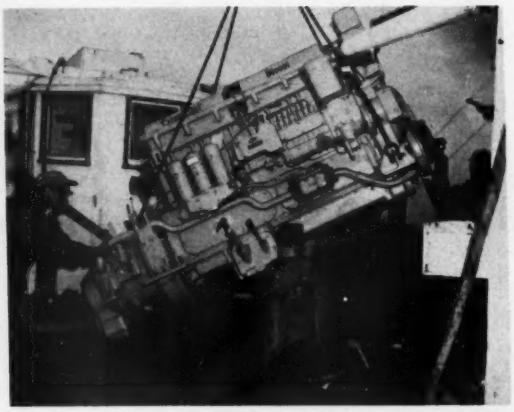
John Hubley, a veteran of the Johnson Motors sales staff, has been named sales manager to succeed Harold T. McCune, who is resigning to establish a marine dealership in Denver, Colo. Announcement of McCune's resignation and Hubley's promotion was made by W. H. Jonas, director of sales of the Waukegan, Ill. outboard manufacturing firm.

Hubley has been Johnson's West Coast representative since 1951, traveling the States of California and Oregon. Prior to then he represented Johnson in the Great Lakes and Southwest territories. He has been with the Company since 1935, and is 42 years old.

In announcing the changes, Jonas pointed out that McCune would continue his association with Johnson in that his firm will serve as motor and parts distributor for Johnson in a 10-State area in the Rocky Mountain region. McCune has been with Johnson since 1935, having become sales manager four years ago.

Jonas announced also the employment of two new sales representatives and a shifting of territorial lines. E. B. (Andy) Anderson of Los Angeles will take over southern California, southern Nevada, and Arizona. William Sackman, for many years in the service department at Johnson, becomes sales representative in Wisconsin.

PLENTY OF POWER



"THAT'S my second Cat Marine Engine going into the hold of my *Jimmy Boy*. The old Cat engine, which I bought used, gave me over 20,000 hours of dependable service. This new Cat D13000 with 150 HP will give me what I want for power with plenty to spare. To my way of thinking, it's the best engine that's come to P'town."

That is the statement of Joseph Roderick of Provincetown, one of the many satisfied Caterpillar Marine Engine owners.

We've got the engine to fit your needs. Call us today for further information on marine engines from 48 HP to 500 HP.

PERKINS-MILTON CO. INC.

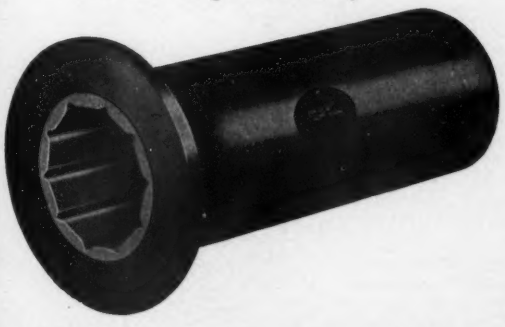
Marine Division: 4 Water St., Fairhaven, Mass. *Phone:* New Bedford 6-0011

Main Office: 376 Dorchester Ave., Boston, Mass. *Phone:* SOuth Boston 8-4660

B.F.Goodrich

Cutless Bearings

For Propeller Shafts



Soft rubber, water lubricated, Cutless bearings give years of trouble free service on fishing vessels. Resist heat, oil, and wear. Quiet and protect shafts too. There is a size and type to fit your boat.

Available at Boat Repair Yards and Marine Equipment dealers.

Lucian Q. Moffitt, Inc.
AKRON, 8, OHIO
Engineers and National Distributors

MEASURED IN LENGTH OF SERVICE ALONE...

MICHIGAN PROPELLERS are BETTER BUYS!

Because they're cast of "MICHALLOY-K", a very special alloy that is far more resistant to corrosion and electrolysis than ordinary bronze, MICHIGAN wheels often last as much as three times as long as other propellers. Next time you need a propeller, buy a MICHIGAN. You'll get not only longer, but better performance, because these wheels are also built to convert every bit of H.P. into effective thrust.

MICHIGAN STAR

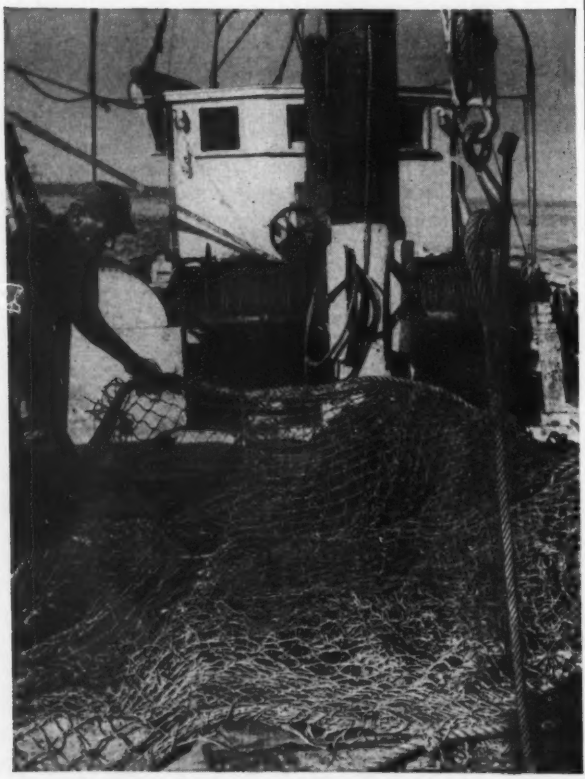
the propeller sensation skippers are all talking about. Now available in 34" — 60" dia.

MICHIGAN WHEEL COMPANY, Grand Rapids 3, Michigan

IT'S A WHALE OF A ROPE!

ROEBLING PREFORMED

SPECIAL GALVANIZED



THIS NEW ROEBLING FISHING ROPE is something to brag about! Its *special galvanizing* gives every inch of every wire a lot more resistance to corrosion. Its *core protection*—the fibre core impregnated with a preservative—wards off excessive absorption; reduces destructive action of salt water, fungi, mildew and dry rot. Its *preforming* makes it easier to handle; gives you smooth drum winding; helps prevent kinking and bending.

Next time you order fishing rope, order Roebling's New Preformed Special Galvanized. And for standing rigging and every other service, there's a Roebling wire rope that will give you top dependability and long-run economy. Call your distributor or the nearest Roebling office. They're listed in the yellow pages. John A. Roebling's Sons Corporation, Trenton 2, N. J.

ROEBLING

Subsidiary of The Colorado Fuel and Iron Corporation

Front view of the new plant of H. O. Penn Machinery Co. at Westbury, Long Island, which was officially opened early in October. The building is of the most modern design and covers 40,000 square feet. On display during the opening ceremonies was a Caterpillar D375 marine engine. The new plant, one of five operated by H. O. Penn, is managed by E. W. Griffith. Other plants are located in the Bronx, N. Y., main office and warehouse, Poughkeepsie, N. Y., Tuxedo Park, N. Y., and Newington, Conn.

New Varna-Plate Marine Varnish

Varna-Plate, a new transparent marine varnish possessing excellent resistance features and exceptionally long lasting gloss, has been developed by the Varna Chemical Co., 717 Union Commerce Bldg., Cleveland 14, Ohio. Non-toxic, non-inflammable and impervious to sunlight, the new marine varnish dries to a hard glass-like finish which it is claimed remains even under the most adverse conditions of weather or service and holds maximum resistance to heat, wear, water, chemicals, solvents and salt.

It is claimed that Varna-Plate will not flake, chip, check or peel, and wood surfaces coated with this new product may be dented sharply without lifting or scarring the coating. "Cured" by means of a catalyst which is added to the resin base before using, the new marine varnish dries to handle in 20 minutes and attains maximum resistance qualities in 1 to 7 days depending upon temperature and curing time desired. Acetone, ethyl acetate, paint remover, gasoline and oils do not affect the coating after properly cured. Varna-Plate has no melting point, and never will become tacky.

Byron Jackson Water-Lubricated Bearings

BJ marine bearing.

A new line of water-lubricated marine bearings in all standard shaft sizes from ¾" diameter through 3", is now available from Byron Jackson Co. Although a relatively new item in the Byron Jackson line, the BJ bearings are the product of more than 25 years of experience in specialized rubber compounding, molding and bonding to metal.

To assure uniform quality in BJ marine bearings, close control of every step in their manufacture is exercised, including the compounding of the special rubber formula within the BJ rubber plant. The bearings are of the full-molded type, capable of supporting the heaviest shaft loads without causing shaft deflection. They are claimed to be ideal for high-speed shafts, providing smoother operation at all speeds and loads and eliminating frequent bearing overhaul and replacement costs, even when used under severe abrasive conditions.

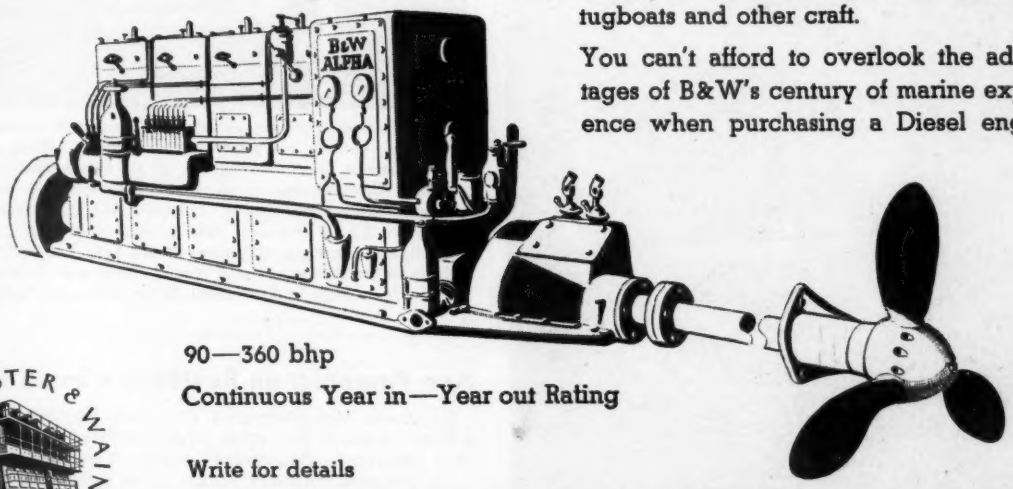
Sale and service of BJ marine bearings is through

B&W Alpha

IT'S NO ACCIDENT!

More Burmeister & Wain Diesel Horsepower is being sold for motorships than any other make in the world. B&W's unequalled experience in building marine power is fully utilized in its manufacture of heavy-duty engines for fishing vessels, tugboats and other craft.

You can't afford to overlook the advantages of B&W's century of marine experience when purchasing a Diesel engine.



90—360 bhp

Continuous Year in—Year out Rating

Write for details

BURMEISTER & WAIN AMERICAN CORPORATION

17 Battery Place, New York 4, N. Y.

marine hardware and supply dealers, according to Robert Kirk, sales manager of the marine bearing activity. Specification details and other information can be obtained from PB Division, Byron Jackson Co., P.O. Box 2493, Terminal Annex, Los Angeles 54, Calif.

Williams, Chrysler Vice President of Sales

Clyde C. Williams

Clyde C. Williams has been elected Vice President of Sales of Chrysler Corporation's Marine and Industrial Engine Division. Associated with Chrysler Corporation for 26 years, Mr. Williams was assigned to the Marine and Industrial Engine Division during World War II. In 1946 he was appointed manager of marine sales, and since December, 1950, has served as the general manager of the entire Division, headquarters of which are located at the Chrysler engine plant in Trenton, Mich.

Mr. Williams joined the service department of Chrysler Corporation in 1928, serving in various capacities until 1934, when he was named to Chrysler's technical service staff. He became a service engineer in 1939, and was appointed assistant director of service in 1942.

On special assignment with the Marine and Industrial Engine Division from 1942 to 1945, Mr. Williams held a key position in which he served as liaison between the Division and many departments of the Army and Navy. He was officially cited by the War Department for outstanding work in determining the production and spare parts requirements for the armed forces and in expediting delivery of critically-needed engines and parts.

Protect Diesel Liners

from Electrolysis and Corrosion

The Connolly-Pacific Company of Long Beach reports big savings on tugboats. On their Despatch #2 they formerly had to replace a liner on the average of every 2 months. After 9 months of operation with an AQUA-CLEAR Feeder, not a single liner needed replacing. They also increased operating temperatures to between 140 and 160° for greater efficiency, in addition to avoiding lost time and liner expense.

Avoid the Heavy Cost of Closed Cooling

Save all the extra expense, space and complicated piping needed for closed cooling. No cumbersome heat exchangers or exposed keel coolers, no expansion tanks, no extra holes through the hull—cuts repair bills, avoids lost time due to breakdowns. Made for all kinds and sizes of marine engines. **Saves thousands of dollars in original cost and maintenance expense!**

Send for FREE Folder

Write today for more information about this amazing and economical installation to operate marine engines in complete safety with direct salt water cooling. **Costs only $36.50 and up.** Larger and smaller sizes in proportion.

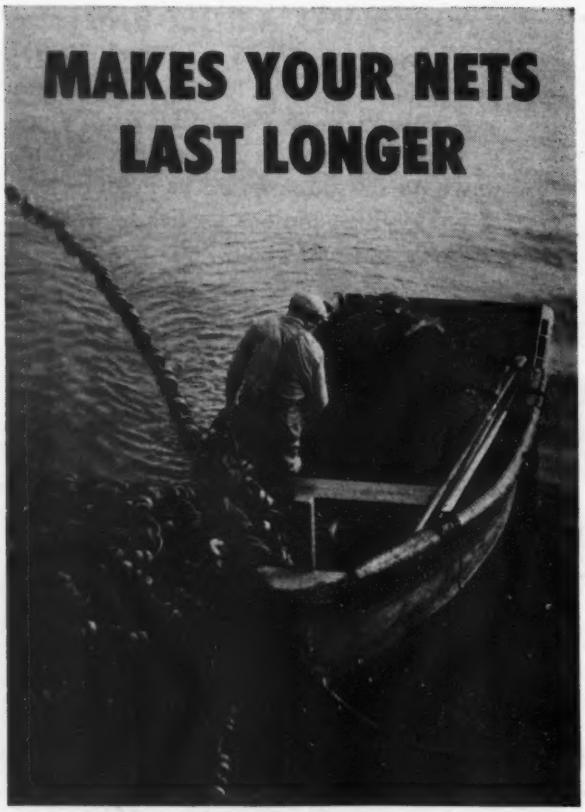
Over 25,000 Now In Use

Sold and Installed by Leading Boatyards

AQUA-CLEAR Feeders

Protect Diesel Engines from Electrolysis and Corrosion

SUDBURY LABORATORY, Box 803, South Sudbury, Mass.



INTERNATIONAL NET DIPS protect nets most effectively. They come ready-to-use, require no heating nor special equipment for application, and are quick drying.

INTERTOX NET DIP #1699 is an inexpensive homogeneous mixture with toxic properties which penetrate completely into the innermost fibres of cotton and linen netting, protecting them from the destructive action of the organisms that cause cordage rot.

G. M. FISHING NET COPPER PAINT #1866 is higher in cost due to the anti-fouling element. Will not injure netting nor cause undue stiffness. Assures protection from fouling much longer than ordinary materials.

The cost of nets is such an appreciable part of the cost of fishing, that materially prolonging the life of nets is of utmost importance to the fisherman. Write today for particulars about these net dips.

International MARINE PAINTS

International NET DIPS

International Paint Company, Inc.
21 West Street, New York 6, N. Y.
So. Linden Avenue, So. San Francisco, Calif.
1145 Annunciation Street, New Orleans, La.

International Paints (Canada) Ltd.
6700 Park Avenue, Montreal, Quebec
105 West, 2nd Avenue, Vancouver, B. C.

WORLD'S LARGEST MARINE PAINT MAKERS

The McCormick-Armstrong award of the Society of Associated Industrial Editors recently was presented the Cummins Bulletin of Cummins Sales & Service, Inc., for doing the top job in the association of promoting a company and its products. This award was one of three presented Editor Victor LeMay. Examining the McCormick-Armstrong plaque are S.A.I.E. President John Solomon of Kansas City; Awards Committeewoman Peggy Gunderson of Salt Lake City, Utah; Cummins Bulletin Editor LeMay of Forth Worth, Texas; and Awards Chairman Jack Raglin of Continental Oil Co. in Houston, Texas.

New Pamphlet on Raytheon's Small Radar

Raytheon Manufacturing Company has made available a new, 12-page, two-color brochure describing its Model 1500 "Mariners Pathfinder" radar. The Model 1500 is a new, low-cost compact 2-unit radar with big radar features. Illustrations, diagrams, and scope pictures, and a full explanation of the new equipment's unusual ease of installation, simplicity of operating controls and servicing accessibility, are contained in the pamphlet.

Since the brochure includes complete specifications, it will be of interest to both technical and non-technical readers. Copies of the pamphlet may be obtained by writing to Raytheon Manufacturing Co., Dept. 6130, 100 River St., Waltham 54, Mass.

Tiffiny Sparkshields for Boats with Radios

Owners of radiotelephone-equipped boats will be interested in Tiffiny "Sparkshields", which remove motor spark noise, but do not affect motor performance or ease of service. Manufactured by Tiffiny Products, 3023 Coral Way, Miami 34, Fla., the Sparkshields are tailored for each engine model to cover and ground out spark noise at its source. They are manufactured of perforated metal to eliminate any chance of condensation, and have self-contained airplane-type fasteners.

Tiffiny Sparkshields are built for salt water use. They are instantly removable, and are available for most popular makes of engines. No plug suppressors are used.

Link-Belt Offers New Catalog

The new Link-Belt 340-page standard products Catalog 950 is now available from Link-Belt Co., 307 N. Michigan Ave., Chicago 1, Ill. The products shown fall into several major classifications, including chains and sprockets for conveying, elevating and power transmission. Tables of pre-engineered drives facilitate the selection of standard roller chain drives and silent chain drives. Complete listings are given of stock and made-to-order chains and sprockets.

The line of enclosed gear drives includes the newly-developed parallel shaft helical drives in addition to herringbone, worm, and Electrofluid drives. The P. I. V. variable speed drive grouping includes 20-25 hp. H6 units with input and output gears.

Transmission products include ball and roller bearings and incorporate listings of the new JPS light duty ball bearings. The broad range of other products for efficient power transmission includes babbitted bearings, pulleys, gears, clutches and couplings.

BOAT CATCHES

For Month of October

Hailing fares. Figure after name indicates number of trips.

GLOUCESTER

Admiral (1)	15,000	Lucy Scola (5)	51,500
Alden (4)	115,000		
Althea Joyce (6)	107,500	Madame X. (6)	11,000
Anna Guarino (11)	42,300	Margaret Marie (7)	60,000
Ann & Marie (9)	19,500	Margie L. (5)	21,000
American Eagle (5)	99,000	Maria Immaculata (10)	105,500
Annie (11)	44,500	Marion & Alice (1)	105,000
Annie & Josie (4)	39,000	Mary (8)	50,000
Anthony & Josephine (8)	69,000	Mary Ann (5)	123,500
Ave Maria (1)	30,000	Mary E. (6)	8,000
		Mary Jane (2)	355,000
Baby Rose (2)	39,000	Minkette 1st (7)	10,000
Bonaventure (2)	310,000	Mother Ann (1)	285,000
California (5)	144,000	Natale III (5)	195,500
Carlo & Vince (6)	82,500	No More (1)	1,000
Catherine (4)	7,000	Nova Luna (3)	8,000
Catherine B. (7)	148,000	Novelty (8)	64,000
Chanco (2)	215,000		
Charlotte M. (2)	257,000	Ocean Life (1)	80,000
Cherokee (1)	15,000	Ocean Spray (2)	77,000
Cigar Joe (4)	105,500	Ocean Wave (2)	119,000
Clipper (2)	220,000	Our Lady of Fatima (1)	230,000
Columbia (1)	200,000		
		Philip & Grace (1)	69,500
Dawn (9)	38,000	Pilhasca (4)	51,000
		Pioneer (8)	39,000
Eddie & Lulu M. (4)	9,500	P. K. Hunt (2)	265,000
Eleanor May (2)	4,500	Priscilla (4)	2,500
Emily H. Brown (1)	185,000	Providenza (1)	3,000
Etta K. (6)	78,500	Puritan (2)	181,000
Eva M. Martin (2)	5,500		
Eva II (6)	14,000	Raymonde (1)	72,000
		Rodman Swift (3)	3,000
Falcon (12)	79,000	Romerly (1)	3,500
Florence & Lee (1)	185,000	Rosalie D. Morse (1)	140,000
Flow (2)	540,000	Rose & Lucy (6)	157,800
Frances R. (5)	62,000	Rosemarie (4)	53,500
Francis L. MacPherson (1)	160,000	Rosie & Gracie (1)	8,000
Frankie & Jeanne (5)	32,500		
		Sacred Heart (1)	5,000
Gaetano S. (1)	83,000	St. Ann (3)	4,000
Gertrude E. (1)	3,000	St. Anthony (2)	285,000
Giacoma (6)	43,000	St. Cabrini (6)	138,500
		St. Francis (8)	83,000
Helen B. (7)	103,500	St. John (5)	14,500
Hilda Garston (1)	180,000	St. Joseph (6)	130,500
Holy Family (1)	170,000	St. Mary (8)	66,500
Holy Name (4)	62,000	St. Nicholas (1)	185,000
		St. Peter (4)	59,000
Ida & Joseph (5)	118,500	St. Providenza (9)	46,000
Immaculate Conception (5)	91,000	St. Rosalie (3)	87,000
Isabelle J. II (1)	11,000	St. Stephen (9)	92,000
		St. Therese (4)	51,000
Jackie B. (3)	42,000	Salvatore & Grace (2)	60,000
Jackson & Arthur (4)	26,000	Santa Lucia (7)	54,500
J. B. Junior (1)	13,000	Sebastiana C. (1)	5,000
J. B. Junior II (2)	38,000	Serafina N. (6)	132,000
Johnny Baby (7)	15,500	Serafina II (3)	47,000
Jorgina Silveira (1)	10,000	Star of the Sea (3)	35,000
Joseph & Lucia (1)	150,000	Stella Maris (5)	84,500
Joseph S. Mattos (1)	200,000	Sunlight (1)	180,000
Josephine P. II (2)	31,000	Sylvester F. Whalen (1)	165,000
Josie II (8)	43,000		
Judith Lee Rose (2)	640,000	Tipsy Parson (9)	19,500
Killarney (1)	170,000	Veronica N. (10)	25,500
Kingfisher (1)	200,000	Victoria (6)	6,000
		Villanova (1)	230,000
Lady of Good Voyage (1)	80,000	Vincie N. (5)	145,000
Limit (1)	1,000	Virginia Ann (6)	78,000
Linda B. (10)	26,000		
Little Flower (11)	106,500	We Three (4)	39,000
Little Joe (7)	98,500	White Owl (7)	26,500
Lone Ranger (1)	3,500	Whitestone (2)	69,000
Lucille B. (1)	6,500	Wild Duck (2)	300,000

Scallop Landings (Lbs.)

Abram H. (1)	9,900

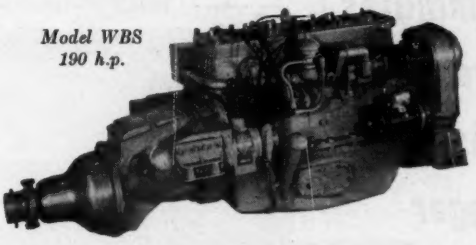
STONINGTON, CONN.

America (14)	41,900	Lt. Thomas Minor (1)	1,200
Averio (8)	2,000	Little Chief (7)	8,600
Bette Ann (13)	8,400	Marise (13)	17,800
Carl J. (3)	6,600	Mary H. (8)	4,000
Carolyn and Gary (14)	31,800	Old Mystic (15)	30,900
Connie M. (16)	13,200	Pvt. Frank Kessler (4)	10,100
Fairweather (10)	29,200	Rita (4)	14,900
Five Sisters (1)	3,900	Russell S. (2)	4,700
Irene and Walter (10)	15,000	Theresa (3)	11,400
Jane Dore (14)	12,900	William B. (14)	31,500

Captain Webb's "Jackbil" was built by M. W. Willis & Son, Marshallburg, N.C.

Famous fisherman chooses
CHRIS-CRAFT MARINE ENGINES

Captain Bill Webb is well known as a sport fisherman from Ocean City, Md., to Bimini in the Bahamas. Last year, he decided to have a new fishing cruiser built, using everything he had learned in his many years of ocean fishing. Result: the 42-ft. *Jackbil* with long-leaf-pine framing, juniper planking, teak decks, all controls in semi-flying bridge with unrestricted view fore and aft — and two dependable Chris-Craft Marine Engines that provide a top speed of well over 21 mph!



Model WBS
190 h.p.

World's best buys in marine engines for commercial fishing, work or fun!

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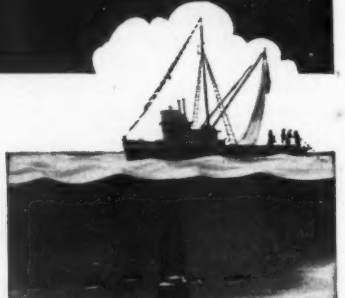

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Christine & Dan (2)	13,300		
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		Roberta Ann (3)	36,700
Dauntless (2)	48,000	Rosemarie V. (3)	20,000
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		St. Ann (3)	53,200
Elva & Estelle (4)	98,100	Sandra & Jean (1)	30,000
Elva L. Beal (3)	11,500	Sea Fox (1)	18,200
Eugene & Rose (3)	50,200	Shannon (4)	57,000
		Solveig J. (3)	140,000
Felicia (3)	116,800	Stanley B. Butler (4)	292,500
		Susie O. Carver (2)	19,500
Gannet (2)	84,700		
Gertrude D. (2)	26,700	Teresa & Jean (3)	160,300
Gladys & Mary (3)	105,200	Tina B. (1)	35,000
Growler (3)	51,400	Two Brothers (3)	19,200
		Venture 1st (3)	106,200
Harmony (3)	45,500	Victor Johnson (3)	83,800
Hope II (3)	49,000	Viking (4)	145,500
Huntington Sanford (2)	13,100	Virginia (1)	87,000
Invader (2)	72,300	Whaler (2)	69,000
Ivanhoe (2)	44,000	Winifred M. (1)	5,700

Scallop Landings (Lbs.)

Agda (3)	14,000	Lauren Fay (3)	31,000
Alpar (2)	22,000	Linda & Warren (1)	4,000
Amelia (3)	29,900	Linus S. Eldridge (3)	30,600
		Louise (2)	22,000
Babe Sears (2)	17,000	Lubenray (3)	16,700
Beatrice & Ida (1)	9,000		
Bobby & Harvey (3)	23,500	Major J. Casey (1)	3,200
Brant (2)	18,200	Malene & Marie (2)	22,000
Bright Star (3)	24,800	Maridor (2)	17,000
		Marmax (2)	21,000
Cap'n Bill (2)	11,400	Martha E. Murley (2)	16,500
Carol & Estelle (1)	8,000	Mary Anne (3)	29,500
Carol & Jack (1)	10,000	Mary E. D'Eon (1)	10,000
Catherine & Mary (2)	20,000	Mary J. Hayes (2)	22,000
Catherine C. (1)	2,000	Miriam A. (1)	2,300
Charles S. Ashley (2)	22,000	Monte Carlo (2)	21,000
		Moonlight (2)	13,700
Dartmouth (2)	22,000	Muskegon (2)	15,800
Debbie & Jo-Ann (2)	22,000		
Doris Gertrude (3)	21,500	Nancy Jane (3)	24,800
Dorothy & Mary (2)	18,000	Nellie Pet (1)	1,800
		New Bedford (2)	21,500
Eleanor & Elsie (2)	22,000		
Elizabeth N. (3)	33,000	Pearl Harbor (2)	14,500
Empress (1)	11,000	Pelican (1)	11,000
Ethel C. (3)	33,000	Porpoise (2)	22,000
Eunice-Lilian (3)	31,400		
		Richard Lance (1)	8,000
Flamingo (3)	29,250	Ruth Moses (2)	22,000
Friendship (2)	12,900		
		Sea Hawk (2)	12,500
Ida K. (1)	10,800	Sea Ranger (3)	33,000
		Smilyn (2)	14,500
Janet & Jean (2)	20,000		
Jerry & Jimmy (3)	33,000	Ursula M. Norton (3)	33,000
John G. Murley (3)	29,400		
Josephine & Mary (2)	20,500	Wamsutta (3)	21,500
		Wm. D. Eldridge (1)	10,000
Kingfisher (1)	11,000	Wm. H. Killigrew (2)	14,000

WOODS HOLE

Arnold (2)	3,600	Madeline (1)	7,400
Barbara (1)	7,400	Noah A. (1)	2,400
Cap'n Bill II (1)	47,600	Reliance (1)	800
Eugene H. (1)	33,800	Susie O. Carver (1)	2,000
Kelbarsam (2)	5,900	Viking (1)	1,000

Scallop Landings (Lbs.)

Debbie Jo-Ann (1)	10,125	Mary E. D'Eon (1)	10,125

ROCKLAND

Calm (1)	300,000	Mabel Susan (2)	22,000
Crest (2)	600,000	Ocean (1)	230,000
Drift (2)	525,000	Rhode Island (1)	9,000
Elin B. (1)	17,000	Squall (2)	600,000
Flo (1)	12,000	Storm (1)	170,000
Helen Mae II (3)	56,000	Surf (1)	300,000
Little Growler (2)	27,200	Wave (2)	600,000

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Addington (1)	12,000	Nanna (1)	5,700
Agnes O. (2)	24,500	Nordby (1)	10,500
Albatross (1)	20,000	Nordic (1)	13,400
Angeles (2)	20,100	Nova (1)	9,000
Ann (1)	4,200		
		Oceanus (1)	8,500
Bergen (2)	34,500	Orbit (2)	22,300
Bernice (1)	5,900		
		Patricia Joan (1)	14,600
California (1)	4,500	Presho (1)	8,800
Estep (1)	3,075	Regina (2)	29,600
Ethel S. (2)	45,500		
Eureka (1)	2,400	St. John II (1)	17,500
Evening Star (1)	9,100	Salty (1)	5,700
		Sanak (1)	15,500
Faith II (1)	9,800	Seagull (1)	12,600
Forward (1)	9,400	Shirley J. (1)	14,000
Freya (1)	13,000	Swift II (1)	16,000
		Sylvia (1)	18,000
Hoover (1)	4,700		
		Tillikum (1)	2,403
Inez M. (2)	27,000	Trinity (1)	24,500
Jane (1)	11,100	Unimak (1)	10,200
		Urania (1)	8,500
Maddock (1)	6,800		
Mermaid (2)	20,400	Yukon (1)	5,500

NEW YORK

Dolphin (2)	46,500	Katie D. (1)	65,000
Golden Eagle (1)	70,000	Tina B. (2)	104,000

Scallop Landings (Lbs.)

Barbara & Gail (2)	20,500	Miriam A. (2)	18,300
Beatrice & Ida (1)	8,600	Nellie Pet (2)	14,100
Carol-Jack (2)	19,800	Norseman (3)	13,250
Catherine C. (2)	17,400	St. Rita (3)	10,350
Clipper (1)	9,500	S. No. 31 (2)	13,500
Enterprise (2)	14,800		

BOSTON

Acme (5)	34,800	Manuel F. Roderick (3)	85,700
Addie Mae (7)	39,400	Maria Christina (3)	16,900
Admiral (3)	115,600	Maria Del S. (6)	29,400
Agatha (3)	242,400	Mary & Jennie (7)	34,000
Agatha & Patricia (3)	111,100	Mary & Joan (1)	61,200
Alphonso (6)	16,700	Michigan (2)	280,200
Angie & Florence (3)	63,000	Mother Frances (3)	131,000
Arlington (3)	469,000		
Atlantic (3)	384,600	Nancy B. (4)	78,300
Ave Maria (1)	48,100	Nautilus (1)	42,000
		Neptune (3)	266,400
Baby Rose (1)	40,100	Notre Dame (1)	52,500
Bay (2)	262,600		
Bonnie (2)	285,500	Ohio (3)	229,900
Bonnie Breaker (2)	335,300	Olympia (3)	121,600
Bonnie Breeze (2)	249,500	Olympia La Rosa (5)	132,000
Bonnie Lou (3)	236,700		
Brighton (3)	386,500	Pam Ann (3)	308,300
Buzz & Billy (3)	120,800	Patty Jean (3)	323,500
		Phantom (2)	229,500
Cambridge (3)	444,700	Philip & Grace (1)	64,400
Carmela Maria (4)	70,900	Plymouth (2)	293,800
Catherine B. (2)	11,700	Princess (1)	10,000
Cherokee (1)	38,000		
Comet (2)	139,200	Racer (3)	336,700
		Red Jacket (2)	243,200
Dolphin (3)	97,600	Roma (7)	43,000
Doris F. Amero (2)	58,600	Rosa B. (3)	181,100
		Rosalie D. Morse (1)	87,500
Edith L. Boudreau (1)	40,800	Rosie (6)	71,000
Elizabeth B. (3)	316,000	Rush (3)	259,000
Evelina M. Goulart (2)	86,500		
		Sacred Heart (5)	18,200
Flying Cloud (3)	530,500	St. Peter II (2)	157,100
4-H-823 (1)	4,800	St. Rosalie (1)	26,800
		St. Victoria (2)	89,300
Gaetano S (1)	87,500	San Calogero (8)	37,500
Geraldine & Phyllis (3)	182,200	Santa Maria (4)	155,400
		Santa Rita (1)	8,300
Hazel B (3)	124,500	Savoia (1)	8,000
		Sebastiana C. (1)	32,800
Jane B. (3)	263,100	Sherry & Scott (2)	43,300
J. B. Junior (3)	215,500	Star of the Sea (2)	46,400
Jennie & Lucia (3)	92,000	Swallow (2)	237,300
Joe D'Ambrosio (5)	26,200		
Jorgina Silveira (1)	28,700	Texas (3)	348,300
Josephine F. (1)	11,200	Thomas D. (4)	180,200
Josephine P. II (2)	63,100	Thomas Whalen (3)	280,600
		Triton (3)	300,900
Lady of Good Voyage (1)	34,500		
Leonarda (2)	10,000	Villanova (4)	153,100
Leonard & Nancy (4)	152,400	Virginia (1)	5,500
Lucky Star (2)	87,000		
		Weymouth (3)	321,000
Magellan (4)	145,500	Wm. J. O'Brien (2)	306,500
Maine (3)	421,600	Winchester (2)	344,500
Malolo (3)	139,500	Wisconsin (2)	328,700

Scallop Landings (Lbs.)

Fairhaven (1)	9,600	Moonlight (1)	6,000

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☐	SEA-ROVER	130 H.P.	6
☐	SEA-MATE (Spec.)	160 H.P.	6
☐	SEA-FARER	225 H.P.	6
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Alice M. Doughty II (2)	50,000	Pocahontas (1)	125,000
Andarte (2)	110,000	Polaris (1)	180,000
Batavia (1)	100,000	Quincy (1)	128,000
Courier (1)	185,000	Resolute (3)	67,700
Dorchester (2)	295,000	St. George (1)	200,000
		Sea King (2)	36,000
Eagle (1)	200,000	Silver Bay (1)	90,000
Elinor & Jean (4)	87,000	South Sea (1)	27,000
Ethelina (4)	94,500	Theresa (1)	60,000
Gulf Stream (1)	130,000	Theresa R. (1)	45,000
Jeanne D'Arc (2)	118,000	Vagabond (2)	46,000
		Vandal (2)	54,000
Kennebec (3)	72,000	Voyager (4)	62,000
		Wawenock (1)	210,000
Lawson (3)	138,500	Winthrop (2)	340,000

Scallop Landings (Lbs.)

Adele K. (2)	19,744	Mary & Julia (2)	22,000
Gambler (1)	8,000		

Live-Bait Equipment

(Continued from page 12)

The nets are moderately buoyed and weighted, with about 2 corks and leads per foot, and a mesh size of from ¾ to 1" by stretched measure, depending on the preference of the fishermen. These are used as a surround net and extend from the surface to the bottom.

Because of obstructions it is necessary to send divers to the bottom to free the net and to keep the lead line together while hauling. The diving equipment may be either a helmet or a face mask supplied by compressed air from the surface or a face mask and an air tank. Because of the need for bending over while clearing the net and the possible loss of air from a helmet, the trend is toward face masks.

Floating Bait Receiver

If the bait is caught in areas too shallow or too hazardous for the clipper to approach, it is transferred to a collapsible receiver which can be towed. The receiver consists of a box stern and midships section (about 10' long, 7½' wide, and 3' deep) and a pointed bow section (about 6' long). The bow section is solidly planked on the leading sides to open the water while towing, but the aftersection is covered on the sides and bottom with netting to provide circulation.

The schools of bait may be located either from the clipper or from the speedboat by surface signs during the day or by phosphorescence at night. In making the set, the dry boat is released holding one end of the net, and the circle is completed by the speedboat towing the net skiff.

Dumping the Bag

Dumping the bag is a critical operation for considerable differential exists between the length of the float and lead lines. The bag must be specially piled so that it can be set as a unit to avoid tearing. If the length of the circle exceeds the length of the net, a running line is paid out so that both ends may be pulled to the net skiff. The lampara is retrieved by hauling from both ends. Until the lead line is aboard, one man throws a weighted line into the opening to scare the fish into and keep them in the bag.

Meanwhile, the dry boat has picked up the cork line at the bag for additional support. After "drying up," the fish may be transferred directly to the clipper if the water is deep enough. Otherwise the bait is transferred to a receiver and towed to the clipper. Transferring is done with scoop nets of ½" mesh holding from 10 to 15 lbs. of bait. After making bait the clipper generally remains from one to several days in quiet water to acclimate the fish to life in the tanks (a "rest period").

Long Island Oyster Plantings To be Made Next Spring

Brookhaven town trustees will plant a large crop of oysters early next Spring, because test plantings of seed oysters in the Moriches, Narrow and Great South Bays have been so successful.

It is believed that within two or three years, Brookhaven shellfishermen will probably again be making a good livelihood oystering. The Great South Bay at one time contained some of the best oyster beds in the world, but little by little the supply decreased. Though Moriches Bay never yielded a fine oyster crop, evidence now shows that it will supply as good an environment for oyster propagation as the western bays.

Different Races of Oysters

According to reports from the Shellfish Laboratory at Milford, Conn., Hudson River oysters are different from those in Connecticut at least as far as certain biological reactions are concerned. Observations on two large plantings of Hudson stock in Connecticut waters showed marked differences in spawning characteristics.

Connecticut oysters finished spawning late in August, while the Hudson oysters were filled with spawn in the middle of September, and some resorbed the gonads without even commencing to spawn.

The same condition existed in oysters from North Carolina and New Jersey. Because of their inability to spawn in the cooler waters, plantings in Long Island Sound will not contribute to increased production of set.

Fishery Landings for July

New York landings of commercially-caught fish and shellfish in the Marine District during July totaled over 39 million lbs. valued at $844 thousand to the fishermen. Landings of menhaden for reduction purposes amounted to approximately 37 million lbs. and accounted for 94 percent of the total poundage for the month. Fluke led all food fish in production, with 621,000 lbs.

Total production of all species for the seven-month period ending with July amounted to nearly 74 million lbs. valued at $4.5 million to the fishermen.

Georgia Oyster Plants Must Be Certified

A crackdown on the sale of oysters by shucking and packing houses which have not been certified by the State Dept. of Health, was announced last month by Dr. C. A. Henderson, Chatham Health Commissioner.

Customers should buy oysters only from those firms selling certified oysters, Dr. Henderson said. Certified oysters can be identified by symbols marked on the container; for example, Ga-1, for oysters packed in this State.

In addition to meeting State sanitary requirements as to the operation of their own establishments, shucking and packing houses are required to get their oysters from areas tested by the State Health Dept. sanitarians.

Steps Taken to Prevent Fish Killing

Damage claims against the Rayonier, Inc. cellulose plant at Jesup have been dropped following the signing of a consent agreement under which the plant will take precautions to prevent fish-killing pollution of the Altamaha River.

In the future the Rayonier plant will have to hold wastes dumped into the Altamaha River to quantities that will not kill fish when diluted with the River; take continuous samples of the wastes before they reach the river and install equipment to analyze them and record the findings.

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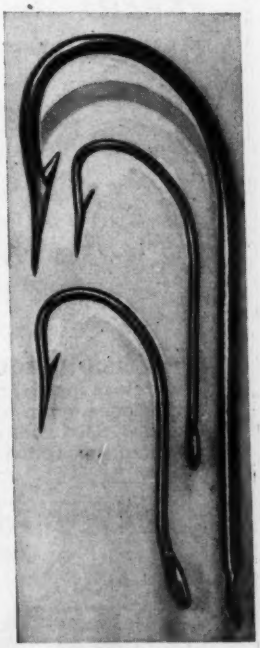

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Mississippi Gets First Commercial Tuna Catch

Early last month the first commercial catch of tuna from the Gulf of Mexico was brought in to Pascagoula by the fishing vessel *Santa Antonio*, Capt. John Rawlings. The catch amounted to 12½ tons of prime yellowfin tuna taken in the central Gulf region. The fish weighed about 100 pounds each.

Another commercial vessel, a converted red snapper schooner operating out of Pensacola, Fla., has begun tuna fishing in the Gulf, and commercial interests in Mississippi are reported to be outfitting a long-line vessel for Gulf tuna operations.

Last Spring Fish & Wildlife Service specialists on the *Oregon* discovered that yellowfins are widely distributed in the Gulf and can be taken at subsurface levels with modified Japanese-style longline gear. On her latest and southernmost tuna expedition, the *Oregon* reported a catch of 102 highgrade yellowfins. Most of the fish were caught on long-line sets along the 26th parallel between Fort Myers, Fla., and Brownsville, Texas.

Fifteen of the tuna were damaged by sharks, leaving 87 which totaled 10,376 lbs., or nearly half the approximately 24,000 lbs. landed on three previous cruises. Purpose of the studies is to determine the length of the Gulf tuna season and to test ways of boating the fish.

The *Oregon*, which will start another tuna cruise in January, planned to leave Pascagoula October 27 to test trawls off the southern tip of the Florida peninsula. The tests will be observed underwater with diving gear.

It is hoped that funds will be made available to step up the Gulf tuna project with special reference to sonar school-detection, proper baiting and fishing technique. The electric-shock line (banned in sports and inshore commercial fishing) has been used successfully in Europe.

Menhaden Landings Heavy During August

Landings of fishery products at Mississippi ports during August amounted to 18,985,000 lbs., compared with 8,989,000 lbs. during August a year ago. This represented an increase of nearly 10 million pounds or 111 percent.

Menhaden production amounted to nearly 17 million lbs. and was more than twice as great as in the corresponding month of the previous year. Shrimp receipts increased this year by 295,000 lbs.

Landings of all fishery products at Mississippi ports for the eight-month period ending with August were over 77 million lbs., compared with 58 million lbs. during the corresponding period the previous year.

New Jersey Prohibits Removal of Oyster Shells from Public Lands

The State of New Jersey, through its Shell Fisheries Council, recently issued an order prohibiting the removal of oyster shells from any shell beds, banks, heaps or reefs located on any of the public lands of the State whether above or beneath the tidal waters thereof, with leased lands exempted from the provisions of the Act. This action was taken to conserve for State use the supply of shells on the public lands of the State.

Menhaden Landings Continue to Climb

Landings of fishery products at New Jersey ports during July totaled 113 million lbs., compared with 103 million lbs. produced during the same month in 1953.

Cape May and Atlantic Counties led all other areas in the production of food fish. Scup or porgy receipts predominated the landings in these areas, while menhaden

accounted for practically the entire production in Monmouth County.

During the seven-month period ending with July, nearly 258 million lbs. of fishery products were landed at New Jersey ports. Menhaden accounted for 90 percent of the landings for this period. Scup or porgy was in second place followed by surf clam meats which are canned in this area. Receipts of sea bass were nearly a million lbs. below the landings of this species for the corresponding period of the previous year.

Some Oyster Beds Closed

State oyster beds in Great Bay, Mullica River and Oyster Creek were closed by resolution of the Shell Fisheries Council from sunrise on October 1 to sunset on November 30.

A total of 8200 bushels of seed oysters have been planted in the Mullica River in recent months. Turtle Island bed was planted with 5200 bushels of seed, while 3000 bushels were planted on Oyster Point Bed.

Producing Seed Oysters Inshore

(Continued from page 13)

polluted, industrially and domestically, than Long Island Sound proper. This should be admitted, but since the Connecticut industry is chiefly concerned with seed oysters which will not be sold for several years, the matter of sanitation does not enter into the picture. Furthermore, the observations indicate that, as far as tolerance to domestic and industrial pollution is concerned, oyster larvae and young set may be hardy organisms.

I base this conclusion on observations that good sets often have occurred in the Quinnipiac River in New Haven, Poquonock River, Bridgeport, and Housatonic River, which drain the most heavily industrial areas in our State. We also may recall that during 1944 when all our industries were at their maximum production for the war effort, and when due to the inflow of hundreds of thousands of industrial workers the problem of domestic pollution became quite acute, we had one of the best oyster sets since 1900.

This, of course, does not indicate that pollution is desirable or harmless to oyster larvae. It merely shows that larvae possess quite a tolerance and, therefore, rivers which are slightly polluted should be considered among the areas capable of producing heavy sets. Furthermore, if the trend toward pollution abatement continues, pollution may not be a problem at all.

Inshore Waters Now Public Grounds

The chief obstacles to the utilization of natural oyster producing bottoms are, in my opinion, the archaic regulations which designated most of the inshore waters as public grounds. In other words, these areas cannot be rented to private individuals or companies for cultivation of shellfish. The regulations, which in the past perhaps were desirable, have led to the situation where we find the majority of our potentially most productive Connecticut area oyster beds virtually barren due to lack of care.

Thus, from economical and biological points of view, these grounds are now entirely wasted. Since there is practically no one making a living from inshore beds in this area, logically no one would suffer if some of the grounds were leased for cultivation to private individuals or companies. By proper cultivation of the inshore beds the industry would become assured of an abundant annual supply of oysters, and the township in the State would gain additional revenue.

Utilization of numerous shallow salt water ponds also should constitute part of the program. Some of the ponds on Martha's Vineyard have proven quite productive, and the studies which we initiated with the help of some Connecticut oyster companies along the same line suggest that such ponds eventually may be utilized not only for the production of seed oysters but also for clams.

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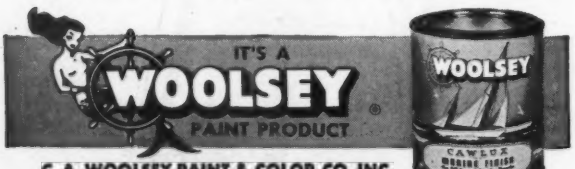

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Canadian Report

By C. A. Dixon

Sardine seiners of southern New Brunswick, where fish have been extremely scarce this Fall, are now engaged in rounding up sardines at the most southwestern point in Nova Scotia. Large catches have been made in the Cape Sable Island region by seiners from Charlotte County. Many sardine carriers from New Brunswick and eastern Maine ports have converged in the Clark's Harbor area and hundreds of hogsheads of the fish are being taken to the factories at Black's Harbor, Eastport and Lubec.

The strike in Nova Scotia waters, although far from the manufacturing plants, has proved itself a boon to all concerned. For the most part the fish are good sardines although there are some large herring among them. The Lubec and Eastport factories are very busy at the time of writing as are the packing plants of Connors Bros., Ltd. in New Brunswick.

Fishermen Catching Hake

Southern New Brunswick trawlers and draggers are landing average-size fares of groundfish, with hake the most plentiful. Scallop fishermen are getting from 15 to 25 gallons to a boat, and the higher price received for the bivalves this year makes it possible to operate the drags at a profit. So far only a limited number of boats are engaged in the work.

Ashore, hundreds of fishermen are busy rigging up their lobster gear in preparation for the opening of the Fall season this month. A number of fishermen at Grand Manan had to build many new traps to take the place of those destroyed by hurricanes when heavy seas swept the stored traps from the tops of breakwaters and wharves. It is expected, however, that more traps will be fished this year than last owing to poor prospects in other lines of fishing.

Landings Show Gain

Canada's sea-fishermen landed 10.3 per cent more fish this August, and the catch was worth 20.7 per cent more than in the corresponding month last year, according to the Dominion Bureau of Statistics.

In the January-August period landings of fish rose to 1,251,657,000 lbs. from 1,101,000,000, and the value climbed to $56,419,000 from $55,479,000.

Scarcity of Clams

Fishermen in Charlotte County, N. B. are finding clams very scarce this Fall, and are reporting production at only a half barrel to a man in a day's digging. The overall production has showed a marked decline this year.

Dulse Pickers Have Poor Season

Dulse pickers at Grand Manan, N. B. have experienced a very poor season because of the continuous rainy weather which prevented the drying of the dulse as in normal seasons. Then the hurricanes caused such a run of heavy seas in the Bay of Fundy that the dulse was swept clear of the rocks upon which it was rooted.

Fishermen Show Ingenuity

Capt. George Lovelace and his son Murray and Burnley Hamilton of the fishing vessel *Alvin and Paul* of Lockeport, N. S., got out of a bad situation when their batteries ran down recently. There was no crank aboard with which to start the dual engines, so they fashioned one out of the anchor stock, using their cabin stove for a forge. They were two days sawing, heating and hammering the iron stock. At the end of the second day they tried the crank and one of the engines started, permitting them to reach port.

New Bedford Scallop Prices Reach High for Year

Scallop prices reached a new high for the year on October 22 at the Pier 3 auction room when a bid of 62.80 cents a pound was made for the 3500-lb. catch of the New Bedford scalloper *Pearl Harbor*. The *Pearl Harbor*, only scalloper to land on the 22nd, returned with less than a third of a normal catch due to machinery breakdown.

Fish and scallop landings during September were 1,750,000 lbs. less than in September 1953. The effects of the hurricanes are reflected in the comparisons, and the scallop average price for the month was up 14 cents a pound over the same period last year. Scrod haddock and cod prices were four cents less in September this year compared to last September.

John F. Linehan, general manager of the Seafood Producers Association, Inc., said the high off-vessel scallop prices reflect the increased demand for the shellfish, created by the promotion campaign. The campaign is sponsored by the New Bedford Scallop Advertising and Promotion Fund Committee, established early this year. The group comprises boat owners and allied industry representatives who contribute to a general fund for advertising purposes.

Fifty percent of the New Bedford scallop boat owners are members of the Committee and had contributed over $9,000 as of August. One percent of catch profits are contributed by the member boats, and 2 percent of service sales by allied industries.

Approximately $1,200 is being spent monthly for radio, television, newspaper and magazine advertising of the product. A survey of the scallop advertising campaign in the metropolitan Hartford area showed 2,000 cases of scallops were sold during the Lenten season this year, as compared to 900 cases last year. The Committee voted recently to extend the scallop advertising campaign to New York State.

Members of the executive committee of the promotional unit are Joseph Carreiro, Eli Braley, Jr., David L. Kelley, Joseph Isaksen and William MacLean.

Draggers to Get New Engines

Two boats of the New Bedford fleet will have new Wolverine engines before the fluke season. The dragger *Jeanie Ann* owned by Antone DiPiro will have a 240 hp. 1400 rpm. Wolverine engine, equipped with Snow-Nabstedt 3:1 reduction gear and Twin Disc forward power take-off, Bosch fuel pumps and nozzles, Winslow fuel filters, Penn alarm switches, and Ross heat exchanger.

John J. O'Malley's *Sea Hawk* will have a 280 hp. 7 x 8½ Wolverine Waukesha. Her new engine will be equipped with Snow-Nabstedt reduction gear, Westinghouse Tridyne controls, Walters keel cooler, Winslow lube oil filters and Bosch injector equipment.

The *Sea Hawk* was towed in after Hurricane Carol by the *Catherine and Mary*. She lost parts of her superstructure, her engine room was filled with water and her engine and electrical equipment were a total loss.

"Jacintha" Crew to be Honored

December 13 will be *Jacintha Day* in Fairhaven and Capt. Sofus Mortensen and crew members of the dragger *Jacintha* will be honored for their daring rescue of 11 crew members of the dragger *Friendship II* during Hurricane Carol. There will be a banquet for the men and their wives followed by a program at the town hall.

Memorial Service Held

A memorial service was held last month in Fairhaven for Edward C. Baldwin, James H. Fitts and Samuel W. Cathcart, all of Fairhaven, who were lost when their vessel the scalloper *Redstart* broke up and sank during the August 31 hurricane, in the Davis South Shoal area.

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"Exide": Electric Storage Battery Co., 42 South 15th Street, Philadelphia 2, Pa.
*Surrette Storage Battery Co., Salem, Mass.
Willard Storage Battery Co., 246 East 131 St., Cleveland 1, Ohio.

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*Wilfrid O. White & Sons, Inc., 216 High St., Boston 10, Mass.

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*Columbian Rope Co., Auburn, N. Y.
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Plymouth Cordage Co., Plymouth, Mass.
Tubbs Cordage Co., San Francisco, Calif.
Wall Rope Works, Inc., 48 South St., New York 5, N. Y.

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Morse Chain Co., 7601 Central Ave., Detroit 10, Mich.

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Edo Corporation, College Point, L. I., N. Y.
Kaar Engineering Corp., Palo Alto, Calif.
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*Cooper-Bessemer Corp., Mount Vernon, O.
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*Detroit Diesel Engine Div., General Motors Corp., Series 51, 71 and 110 Marine Diesels, 13400 W. Outer Drive, Detroit 28, Mich.
*Enterprise Engine & Machinery Co., 18th and Florida Sts., San Francisco 10, Calif.
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*The National Supply Co., Engine Division, Springfield, Ohio.
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Ford Marined Engines, 3627 N. Lawrence St., Philadelphia 40-AF, Penna.
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*Westerbeke Fishing Gear Co., Inc., 279 Northern Ave., Boston, Mass.

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*John A. Roebling's Sons Co., Trenton 2, N. J.
Wickwire Spencer Steel Division of The Colorado Fuel & Iron Corp., Palmer, Mass.

Nautical Facts

Courtesy of "Proceedings of the Merchant Marine Council"

Q. List some precautions to be taken with electrical gear.

A. 1. Never attempt to alter or repair any electrical gear; call a trained technician when repairs are necessary.

2. Never touch a live wire, and be particularly careful around any electrical apparatus if the hands are wet or it is necessary to touch moist surfaces.

3. Never allow naked wires in the vicinity of gasoline or other explosives.

4. Never paint screw threads, label places, hinges, etc., or electrical fittings.

5. Do not energize transmitter antennas within 50 feet of any fueling operation.

6. Unauthorized crew members should not attempt to perform any work on equipment in radio transmitter spaces.

7. Before a man is sent aloft for any reason, the radio room should be notified and arrangements made to suspend radio transmission while the man is aloft. No man should go aloft until definite word has been received that the power has been turned off.

Q. What motorboats are designated as class 2?

A. Those 26 to 40 feet in length.

Q. Is an examination required to obtain a license to operate a motorboat carrying passengers for hire? What type?

A. Yes, an oral one.

Q. Will a buoyant cushion pass as a life preserver on motorboats not carrying passengers for hire?

A. Only on boats up to 40 feet in length.

Q. Will a buoyant cushion pass as a life preserver on boats carrying passengers for hire?

A. No!

Q. Is there a substitute for life preservers, buoyant cushions, etc., on motorboats not carrying passengers for hire?

A. Yes, ring buoys.

Q. Are motorboats over 15 tons, carrying passengers for hire, subject to inspection?

A. Yes.

Q. What is the purpose of the rules of the road?

A. To prevent collisions at sea and on the local waters.

Q. When do the rules of the road apply? To which vessels?

A. To all types of vessels under way.

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CLASSIFIED ADVERTISING

Rates: $1.00 per line, $5.00 minimum charge. Count 9 words to a line. Closing date, 25th of month. National Fisherman, Goffstown, N. H.

FOR SALE

Cruisers, draggers, auxiliaries—all types and sizes. If you are in the market for anything in that line, please write us—no inquiry too small to merit attention. KNOX MARINE EXCHANGE, INC., CAMDEN, MAINE.

ENGINES FOR SALE

Fully rebuilt 90 hp. and guaranteed gasoline marine engines, $495.00. Write for bargain list. Osco Motors Corp., Philadelphia 40-AF, Penna.

DRAGGER "PATRICIA-ANN" FOR SALE

78' completely rebuilt, new General Motors 110 hp. main engine, 4 cylinder General Motors engine to operate Hathaway winch. New fuel tanks, batteries, new net, complete with gear. Ready to go. Patricia Ann Fisheries Corp., 2124 Mill Ave., Brooklyn, N. Y. Tel. Esplanade 7-8319.

BOAT "MONOMOY" FOR SALE

Boat *Monomoy* for sale by owner. 74'x15.3'x7' draft, completely equipped with 180 hp. Superior Diesel, 2:1 reduction, fathometer, direction finder, radiotelephone, oil burning hot water heat, hot & cold running water, large electric refrigerator, oil burning galley range, crew quarters for 6, large deck house. Easily convertible to fishing or passenger service. Now in water at Essex, Conn. John G. Holbrook & Son, Inc., Westbrook, Conn.

GOVERNMENT GIVING AWAY SURPLUS

We just purchased 500 all-bronze Monel shaft 2½" inlet 2" outlet circulating water pumps made by Marine Products. These pumps list for around $100.00 each. We are selling them for $30.00 in lots of 1, and in lots of 4—$25.00 each. Electro Diesel Corporation, P. O. Box 4842, Normandy Branch, Miami Beach 41, Fla.

DRAGGER "ACME" FOR SALE

65 ft., 240 hp. Wolverine engine two years old. Fully equipped including 3 nets, radio compass, telephone, Bendix fathometer, deck engine and auxiliary engines. Will ice 60,000 lbs. Boat now fishing and in A-1 condition. Call or write James Primo, 14 Putnam Road, Somerville, Mass. Tel. No. Pr-6-6884.

ENGINE FOR SALE

120 Murphy Diesel ME4, engine #13133D, serial #20488, with Twin Disc hydraulic fluid coupling. S. G. Co., 75 Central St., Boston, Mass. Tel. Liberty 2-4366.

DRAGGER "BABY 2ND" FOR SALE

Fishing dragger *Baby 2nd*, 63' overall, 187 hp. Hercules Diesel, 3:1 reduction gear. Radio, fathometer and direction finder. Boat now fishing. Capt. Aldo Bacchiocchi, Pearl St., Noank, Conn. Tel. Jefferson 69217.

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NEW SURPLUS IN LARGE QUANTITY

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SURPLUS ENGINES

We just bought Chrysler engines. They are unused surplus and are Royal Model M-8. They are complete with reverse and reduction gears of 4:1 and 9:1. We are offering these for $550.00 each, F.O.B. Miami. If you have a Royal engine and are thinking of overhauling you can use your 1:1 or 1½:1 or 2:1 in place of the gear on the back of this and have an unused surplus engine for this amount. Electro Diesel Corporation, P. O. Box 4842, Normandy Branch, Miami Beach 41, Fla.

TRAWLERS FOR SALE

One new 70 ft. deluxe shrimp trawler. 19 ft. beam, 7½ ft. draft, 40 net tons. Equipped with one 6-110 G.M. Diesel engine with 4.5:1 reduction gear. Completely rigged and ready to go shrimping.

One new 70 ft. deluxe model trawler, 20 ft. beam, 7½ ft. draft. No engine installed as yet. Will purchase engine upon buyer's request. For more information, contact Conrad Industries, Inc., 1501 Front St., Morgan City, La.

POGIE BOAT FOR SALE

97 ft. A.M.C. hull, good condition, with or without 400 Atlas engine, reasonable. S. G. Co., 75 Central St., Boston, Mass. Tel. Liberty 2-4366.

REBUILT MARINE ENGINES

Caterpillar "88"; G. M.; International "45"; Buda "110"; Kermath "125"; Chrysler Crown, Royal. Our engines now better than ever. Helwege Co., 741 S. Ocean Ave., Freeport, N. Y.

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The "Anson T" is one of Mr. Toups' shrimp trawlers which has used Gulflube Motor Oil H.D. and Gulf Diesel Fuel in the engine for many years with such good results. "I use Gulf Diesel Fuel in both engines, and find that they don't smoke and the nozzles stay clean," says Mr. Toups.

"Better all 'round lubrication the year 'round with GULFLUBE MOTOR OIL H. D."

says Mr. Ramie Toups, Jr. of Golden Meadow, La.

"The engines of my two deep-sea trawlers, the 'Anson T,' powered by a 150 H.P. Murphy Diesel, and the 'Raymond T,' with a 165 H.P. General Motors Diesel, operate the year around on Gulflube Motor Oil H.D. with excellent results," says Mr. Toups. "Rings don't stick, there's no wear to speak of, and oil consumption stays low. I am certainly sold all around on Gulf."

Ramie Toups, Jr. is one of many fishing boat operators who have learned through years of experience that Gulf products contribute to smoother, more dependable engine performance, and lower repair costs.

Gulf quality lubricants and fuels are available at commercial ports from Eastport, Maine to Brownsville, Texas. See your friendly Gulf marine dealer today, or contact your nearest Gulf Office. Gulf Oil Corporation · Gulf Refining Company, 1822 Gulf Building, Pittsburgh 30, Pennsylvania.

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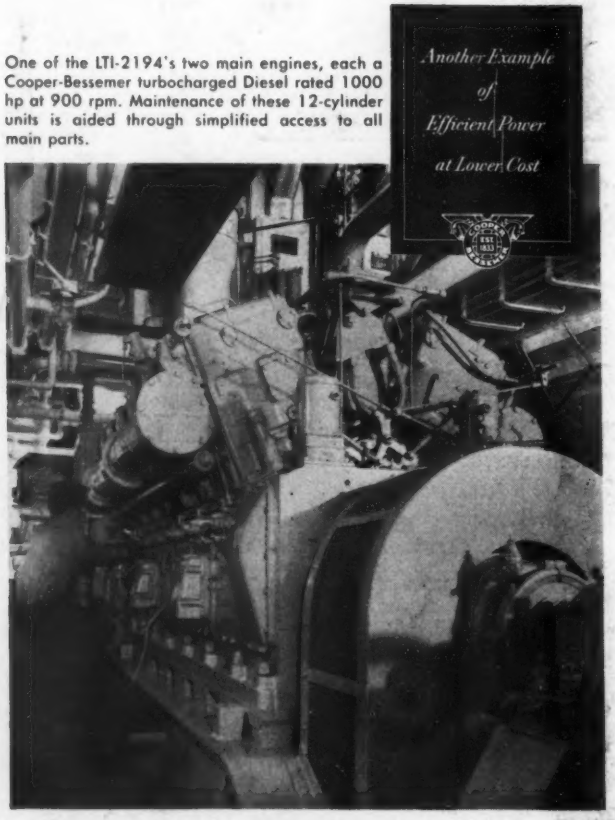
Turning within her own length, the Cooper-Bessemer powered LTI-2194 demonstrates unusual maneuverability on the Ohio River near Dravo Corporation's Neville Island yard where she was built.

COOPER-BESSEMER-POWERED LTI-2194 . . . FIRST TOWBOAT WITH VERTICAL AXIS PROPELLERS

One of the LTI-2194's two main engines, each a Cooper-Bessemer turbocharged Diesel rated 1000 hp at 900 rpm. Maintenance of these 12-cylinder units is aided through simplified access to all main parts.



Two 1000 hp FVA's take on unique powering job

Main propulsion power for the new and unique U. S. Army rudderless towboat LTI-2194 is provided by two rugged 1000 hp Cooper-Bessemer FVA turbocharged Diesels.

With these modern and highly efficient V-type Cooper-Bessemers in the experimental craft's engine room, the Transportation Corps of the U. S. Army can depend upon continued Diesel performance at its finest for its mission of moving military cargoes over overseas inland waterways.

The revolutionary LTI-2194 is capable of extreme maneuverability for maximum control of heavily-laden barges in restricted areas and fast flowing rivers.

For workboat requirements, unique or routine, you'll profit from the prolonged security and full-power response that Cooper-Bessemers afford. Contact the office nearest you for further facts on features that will save you time and money year after year.

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